

EN

This text is made available for information purposes only.

A summary of this decision is published in all Community languages in the Official Journal of the European Union.

***Case No COMP/M.5153
- ARSENAL/DSP***

Only the English text is authentic.

**REGULATION (EC) No 139/2004
MERGER PROCEDURE**

Article 8(2)
Date: 09/01/2009



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 09/01/2009
C(2008) 8439 final

PUBLIC VERSION

COMMISSION DECISION

of 9 January 2009

**declaring a concentration to be compatible with the common market
and the EEA Agreement**

(Case No COMP/M.5153 - ARSENAL/ DSP)

COMMISSION DECISION

of 9 January 2009

**declaring a concentration to be compatible with the common market
and the EEA Agreement**

(Case No COMP/M.5153 - ARSENAL/ DSP)

(Only the English text is authentic)

(Text with EEA relevance)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to the Agreement on the European Economic Area, and in particular Article 57 thereof,

Having regard to Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings¹, and in particular Article 8(2) thereof,

Having regard to the Commission's decision of 6 August 2008 to initiate proceedings in this case,

Having given the undertakings concerned the opportunity to make known their views on the objections raised by the Commission,

After consulting the Advisory Committee on Concentrations,

Having regard to the final report of the Hearing Officer in this case,

Whereas:

¹ OJ L 24, 29.1.2004, p. 1.

1. INTRODUCTION

1. On 17 June 2008, the Commission received a notification of a proposed concentration following a referral request pursuant to Article 22(1) of Regulation (EC) No 139/2004 (the Merger Regulation) by which the undertaking Arsenal Capital Partners ("Arsenal", US) ("the notifying party") acquires, within the meaning of Article 3(1)(b) of the Merger Regulation, control of the whole of the undertaking DSM Special Products B.V. ("DSP", the Netherlands), a subsidiary of the Royal DSM N.V. ("DSM", the Netherlands), by way of purchase of shares (Arsenal and DSM are hereinafter together referred to as "the parties").
2. The Commission's jurisdiction in this case is based on the referral request of 2 April 2008 submitted by the Spanish Competition Authority pursuant to Article 22(1) of the Merger Regulation. This request was joined on 28 April 2008 by the German Competition Authority. The Commission accepted the referral by decision of 16 May 2008, which was communicated to the notifying party on 29 May 2008.
3. After examination of the notification, it was concluded that the notified concentration falls within the scope of the Merger Regulation. It was also concluded that the concentration as initially proposed by the notifying party would lead to a significant impediment of effective competition in the EEA. The notifying party however submitted a set of remedies susceptible to restore effective competition. It was thus concluded that the transaction would not lead to significant impediment of effective competition, subject to the implementation of the commitments submitted by the notifying party.

2. THE PARTIES AND THE OPERATION

4. Arsenal is a private equity firm which controls, via its Arsenal Capital Partners QP fund, the undertaking Velsicol Chemical Corporation ("Velsicol", Estonia). Velsicol produces plasticizers, food additives and industrial intermediates. It is the only Arsenal business with activities in the sector affected by the proposed transaction.
5. DSP, a subsidiary of DSM, produces food additives and industrial intermediates.
6. Both Velsicol and DSP are active in the manufacture and supply of benzoic acid and sodium benzoate. Velsicol also manufactures benzoate plasticizers, a downstream product to benzoic acid in the EEA (Estonia), the United States and China. In China, Velsicol produces this product in a joint venture with Wuhan Youji Industries Company Limited ("Wuhan", China) ("the joint venture"), the parties' largest Chinese competitor for the production of benzoic acid. In the United States, Velsicol purchases benzoic acid for the production of plasticizers from Emerald Kalama Chemical LLC ("Emerald", United States), the parties' only US competitor for the production of benzoic acid, sodium benzoate and benzoate plasticizers.
7. The operation relates to the acquisition of control by Arsenal of DSP. DSP is currently a wholly-owned subsidiary of DSM, the seller. The proposed transaction, which concerns the manufacture of base chemicals, consists of the acquisition by Arsenal of 100% of the shares of DSP.

8. However, the VevoVital trade mark will continue to be owned by DSM Nutritional Products ("DNP" the Netherlands), a subsidiary of the DSM group. Under a supply agreement signed between DNP and DSP on 5 February 2008, DSP will continue to manufacture and sell VevoVital to DNP. VevoVital is the trade mark given to high purity benzoic acid for use in animal feed, currently protected by a patent owned by DSP.
9. As the proposed transaction will give Arsenal sole control of DSP, through the acquisition of its entire issued share capital, it constitutes a concentration as defined in Article 3 (1)(b) of the Merger Regulation.

3. COMMUNITY DIMENSION

10. The operation does not have a Community dimension within the meaning of Article 1 of the Merger Regulation. It does not meet the thresholds laid down in Article 1(2) of the Merger Regulation: the parties do not have a combined aggregate worldwide turnover of more than EUR 5 000 million (Arsenal: EUR [...] * million, DSP: EUR [...] * million), and the aggregate Community-wide turnover of each of the parties is below EUR 250 million (Arsenal: EUR [...] * million, DSP: EUR [...] * million). The proposed transaction also does not meet the turnover thresholds laid down in Article 1(3) of the Merger Regulation.
11. However, the proposed transaction falls within the jurisdiction of the Commission following the requests for referral submitted by the competition authorities of Spain and Germany pursuant to Article 22(1) of the Merger Regulation and accepted by the Commission by decision of 16 May 2008 in accordance with the second subparagraph of Article 22(3) of the Merger Regulation.

4. RELEVANT MARKETS

12. The proposed transaction relates to the production of (i) technical grade benzoic acid, (ii) sodium benzoate and (iii) benzoate plasticisers.
13. Both parties produce liquid benzoic acid and various downstream products which require liquid benzoic acid as input in their respective plants in Estonia (Arsenal/Velsicol) and Rotterdam (DSP). No other competitor produces liquid benzoic acid in the EEA. The liquid benzoic acid which Velsicol produces in Estonia is used only for captive purposes. Conversely, DSP uses liquid benzoic acid for both captive use and sales on the merchant market, in particular to producers of benzoate plasticizers. Both Velsicol and DSP produce solid benzoic acid, by "flaking" liquid benzoic acid, in their respective plants, and no other competitor produces solid benzoic acid in the EEA.

* Parts of this text have been edited to ensure that confidential information is not disclosed; those parts are enclosed in square brackets and marked with an asterisk

14. Both parties produce sodium benzoate by using liquid benzoic acid in their Estonian and Rotterdam plants respectively. These two plants are the only plants for the production of sodium benzoate in the EEA.
15. Benzoate plasticizers, products that require either liquid or solid benzoic acid as an input, are produced by Velsicol in its Estonian plant. DSP itself does not produce any benzoate plasticizers, but supplies benzoate plasticizer producers in the EEA with liquid benzoic acid. According to the notifying party, the main reason why Velsicol is acquiring the Rotterdam facility is to expand its own benzoate plasticizer production into this facility. This expansion would also require building additional capacity for the production of liquid benzoic acid.
16. The product and geographic markets are set out separately for benzoic acid (liquid and solid forms constituting two separate markets) (Section IV.A), sodium benzoate (Section IV.B) and benzoate plasticizer (Section IV.C).

4.1.BENZOIC ACID

17. Benzoic acid is a shiny white crystalline solid produced by the partial oxidation of toluene. Toluene, the main input of benzoic acid, is usually produced as a by-product in the process of making gasoline. Toluene accounts for approximately 80% of the cost of producing benzoic acid.
18. Benzoic acid is used as an input in a range of end-use applications. It is, for example, used as an antimicrobial preservative in food and drinks, in animal feed, in pharmaceutical products, for the production of other chemicals (such as sodium benzoate, potassium benzoate, calcium benzoate and benzoate plasticizers), in paints and coatings, as well as in personal healthcare products.
19. Benzoic acid can be segmented according to different degrees of purity: (i) ultra pure benzoic acid (purity of 99.98%) which is used for food and pharma applications, (ii) benzoic acid for animal feed (purity of 99.9%) and (iii) technical grade benzoic acid (purity of up to 99.85%) which is used as input for other chemicals and products, such as sodium benzoate, potassium benzoate, calcium benzoate and benzoate plasticizers.
20. Regarding the latter, there are two forms of technical grade benzoic acid: liquid technical grade benzoic acid and solid (flake) technical grade benzoic acid.
21. Solid technical grade benzoic acid is produced by solidifying liquid technical grade benzoic acid and forming it into flakes. Liquid benzoic acid is therefore an “input” in the production of solid benzoic acid.
22. Arsenal/Velsicol produces liquid technical grade benzoic acid in its plant in Estonia and uses 100% of the output as an input in the production of solid benzoic acid, sodium benzoate and benzoate plasticizers. Accordingly, Arsenal/Velsicol does not currently sell liquid benzoic acid on the merchant market.
23. DSP produces (i) ultra pure benzoic acid, (ii) benzoic acid for animal feed, (iii) liquid and solid technical grade benzoic acid and (iv) sodium benzoate in its plant in Rotterdam. It sells a part of its production of liquid technical grade benzoic acid on

the merchant market (especially to producers of benzoate plasticizers). DSP does not produce any benzoate plasticizers.

4.1.1. Product market

Submission of the notifying party

24. The notifying party submitted that the market for benzoic acid should be divided into different product markets according to the purity or grade of benzoic acid:
 - (i) ultra pure benzoic acid;
 - (ii) benzoic acid for animal feed (namely VevoVital); and
 - (iii) technical grade benzoic acid; in addition, technical grade benzoic acid should be subdivided into:
 - (a) liquid benzoic acid; and
 - (b) solid (flake) benzoic acid.
25. According to the notifying party's submission, the activities of Velsicol and DSP only overlap with regard to solid technical grade benzoic acid, as Velsicol is not active in the markets for ultra pure benzoic acid, or benzoic acid for animal feed, or the merchant market for liquid benzoic acid.

Results of the Commission's market investigation

26. In line with the notifying party's submission, the results of the Commission's market investigation indicate that there is a separate product market for different grades of benzoic acid, namely (i) ultra pure benzoic acid, (ii) benzoic acid for animal feed (VevoVital), and (iii) technical grade benzoic acid.
27. Those three markets are in particular characterised by important supply-side and demand-side differences. Ultra pure benzoic acid has a purity of at least of 99.98%, and a special purification process is needed for its production. Similarly, Community legislation requires a very high degree of purity for animal feed benzoic acid which is not met by Velsicol's purification technology. VevoVital, benzoic acid for animal feed, is produced by DSP but not by Velsicol. VevoVital was developed by DSP for use as an additive in animal feed and is protected by patents which are not due to expire until 2015. These patents prevent other benzoic acid manufacturers from producing benzoic acid for animal feed, but even if they were able to supply this product, they could face a significant barrier in order to overcome the reputation and strong brand name that DNP, a subsidiary of DSM, has developed over time. In addition, there are also important price differences between the different grades of benzoic acid.
28. The Commission's market investigation also confirmed the notifying party's submission that technical grade benzoic acid (hereinafter "benzoic acid") should be further sub-divided into liquid and solid technical grade benzoic acid (hereinafter "liquid benzoic acid" and "solid benzoic acid") considering the supply and demand side differences between the two products.
29. Specific equipment is needed to convert liquid benzoic acid into solid form and different equipment is required for the transportation of the two products. Solid

benzoic acid is produced by solidifying liquid benzoic acid. Liquid benzoic acid solidifies at 120°C. Solid benzoic acid is then divided into smaller units (flakes) using a "flaker", and is subsequently packaged. Accordingly, the production of solid benzoic acid requires solidification, flaking and packaging equipment which is not needed for the production of liquid benzoic acid. As liquid benzoic acid solidifies at a temperature of 120°C, liquid benzoic acid requires specialised transportation technology which keeps the product hot, preventing it from solidifying. This is generally done in insulated trucks or train containers, and occasionally in train containers fitted with coils which allow the benzoic acid to be heated up should it solidify on the way. As a consequence, liquid benzoic acid can only be transported over limited distances.

30. In addition, although liquid and solid benzoic acids are interchangeable based on their chemical properties, the Commission's market investigation indicates that customers of liquid benzoic acid are not willing to switch to solid benzoic acid and vice versa.
31. Customers need different on-site handling and processing facilities for liquid and solid benzoic acid. Customers can either use the liquid benzoic acid immediately when it is delivered on site (hot and liquid) by pumping it directly into the production process or they can invest in heated tanks to store the liquid benzoic acid. Such storage facilities would require an investment of between EUR 300 000 and EUR 1 million (depending on the volumes), which would make commercial sense only for large volume customers purchasing about 1 000 to 2 000 tonnes per annum. Considering that customers of solid benzoic acid are generally end-users buying smaller quantities of benzoic acid or distributors who purchase and make onward shipments of benzoic acid, it is hardly feasible for them to purchase liquid benzoic acid.
32. It is also unlikely that customers that use liquid benzoic acid would be willing to switch to solid benzoic acid. Most of the parties' customers that use liquid benzoic acid use it for applications such as the production of benzoate plasticisers or benzyl chloride for which (i) the liquid form is preferred as the process requires liquid inputs, and (ii) large volumes are required. Accordingly, if these customers were to decide to use solid benzoic acid instead of liquid benzoic acid, they would have to melt the solid benzoic acid before using it for further production process. In the Commission's market investigation, customers estimated the investment for such melting facilities at between EUR 1 million to EUR 2 million, whereas the notifying party submitted that an investment of EUR 300 000 would be sufficient. In addition, the price of liquid benzoic acid is on average 15%² cheaper than the price of solid benzoic acid.³ This is also consistent with the results of the Commission's market investigation where

² Response of the notifying party to the questionnaire to the Parties of 22 August 2008, question No 21. DSP data.

³ It should, however, be noted that customers who purchase liquid benzoic acid generally purchase large quantities and therefore benefit from a volume discount. According to the notifying party, the difference in price between solid and liquid benzoic acid for a large customer would be less than 5% [Reply to the Statement of Objections, paragraph 169]. However, when analysing the data provided by the notifying party, the Commission concluded that DSP customers who purchase similar volumes of solid benzoic acid would pay at least a 5% to 10% premium over DSP's price for liquid benzoic acid [Response of the notifying party to the questionnaire to the Parties 22 August 2008].

customers of liquid benzoic acid reported that they would not be willing to switch to solid benzoic acid. One of the customers indicated that it would rather leave the market than switch to solid benzoic acid.

33. The issue of whether using solid or liquid benzoic acid was also discussed internally by Arsenal/Velsicol with regard to the benzoic acid that was needed for its benzoate plasticizer plant in the United States after the shut down of its US benzoic acid plant in Chattanooga: "solid increases labour cost and capital cost. It takes hours of dedicated labour to unload big bags versus hooking a couple hoses and starting a pump. Also take bag dump station, dust collector, melt tank and such versus just a pump".⁴ Thus, there appears to be significant cost differences between using solid benzoic acid versus liquid benzoic acid.
34. Based on those considerations, it should be concluded that liquid benzoic acid and solid benzoic acid form two different product markets.

4.1.2. Geographic market – solid benzoic acid

35. The notifying party submits that the relevant geographic market for solid benzoic acid covers at least the EEA, the United States and Asia, with these regions accounting for virtually all global production. The notifying party submitted a number of arguments in support of this proposed market definition.
36. Firstly, the notifying party argues that Chinese exports into the EEA have increased significantly during recent years, highlighting the competitive pressure exerted by Chinese producers in the EEA.
37. Secondly, the notifying party argues that transport costs and tariffs are low, and consequently that there are no trade barriers that inhibit sales to any region in the world. As evidence of this, the notifying parties submit that both Velsicol and DSP sell over 50% of their production outside the EEA.
38. Thirdly, according to the economic studies submitted by the notifying party, (i) the price correlation studies show that from January 2002 to July 2008 prices of solid benzoic acid in the EEA, Asia and North America moved closely together and are highly correlated, (ii) price levels in the EEA/Asia and EEA/North America have been converging in recent years, and (iii) cash and percentage gross margins for solid benzoic acid between January 2002 and July 2008 also moved broadly in line with each other.⁵
39. In reply to the Statement of Objections, the notifying party maintained its submission that the relevant geographic market is world-wide. The new facts and arguments submitted by the notifying party did not, however, challenge the Commission's conclusion that the relevant geographic market for benzoic acid is EEA-wide.

⁴ Arsenal/Velsicol's Email "RE: buying benzoic acid in the merchant market" (Wednesday, 18 October 2006 9:27 PM).

⁵ See Keynote memo – Benzoic Acid, 28 September 2008, submitted on behalf of the notifying party.

40. The Commission's market investigation, the parties' internal documents and the analysis of pricing data from DSP, Velsicol and Emerald, do not confirm a world-wide market definition but point instead to an EEA-wide market for solid benzoic acid. The main evidence supporting an EEA-wide market is the following: (i) the market for solid benzoic acid in the EEA is to a very large extent dominated by EEA-based producers, there are only very few imports coming from China and the United States, and this trend has been constant at least for the last nine years, (ii) transport costs and tariffs constitute important barriers to entry for non-EEA based producers, (iii) the quality of Chinese benzoic acid is perceived by customers as low compared to that produced by EEA-based producers, and (iv) the pricing relationship between the EEA, Asia and North America has not been stable over time.

4.1.2.1. Limited imports from China and the United States

41. The Commission's market investigation, as well as the parties' internal documents, indicates that despite some international trade flows, Chinese and US producers export only very limited volumes of solid benzoic acid into the EEA.
42. The notifying party submitted that the total EEA market for solid benzoic acid represents approximately [16 000-18 000] tonnes, and that the combined sales of Velsicol and DSP in the EEA would correspond to [14 000-16 000] tonnes in 2007. This would account for approximately [85-91]% of the overall EEA market. According to the submission of the notifying party, Wuhan and other Chinese producers would account for approximately [10-15]% of the overall EEA market⁶ (1 900 tons), whereas the US producer, Emerald, would have a minimal presence ([...]* tonnes sold in the EEA), as well as other producers (100 tonnes sold in the EEA).
43. The Commission's market investigation indicates, however, that the volume of Chinese exports to the EEA is significantly overestimated by the notifying party. The notifying party calculated the sales of benzoic acid in the EEA achieved by Chinese producers on the basis of the data collected by Eurostat. Eurostat indicates that in 2007 sales of benzoic acid, its salts (sodium benzoate) and esters (benzoate plasticizers) amounted to 7 404 tons. The notifying party submitted that benzoic acid accounted for 25% of this volume. This, however, is not in line with the results of the Commission's market investigation which indicates that benzoic acid exported from China to the EEA accounts for no more than [0-5]*% of Chinese exports of benzoic acid, its salts and esters⁷.
44. In 2007, the Chinese producers thus had a limited market share in the EEA of [1-2]%. The very limited level of imports of benzoic acid from China into the EEA is in particular consistent with the Commission's market investigations indicating that none of the parties' distributors or end-users who replied to the Commission's market investigation purchased benzoic acid from Chinese producers in 2007. Moreover,

⁶ The notifying party is not aware of any official data which reports the sale of benzoic acid separately. Accordingly, it bases its estimate of the Chinese benzoic acid exports on Eurostat data providing aggregate figures for benzoic acid, its salts and esters.

⁷ Detailed analysis is set out in Chapter V. Market Conditions (Recitals 171 to 183 on V.A. Benzoic Acid)

according to Wuhan's response to the Commission's questionnaire, its exports to the EEA were not much higher in the period from 2004 to 2006, as they amounted to [...] tonnes in 2004 and 2005, and [...] tonnes in 2006. In addition, Wuhan's sales in the EEA amounted to only [...] tonnes during the first half of 2008. Thus, for the last several years, exports of Chinese producers to the EEA remained stable and did not increase.

45. The role of the US producer, Emerald, is also minor much like the role of the Chinese producers, as its market presence in the EEA was only marginally higher than that of the Chinese producers in 2007 and has actually decreased by [50-60]*% during the last nine years, although the euro has significantly appreciated during that time. In particular, Figure 1 plots the US (Emerald's) exports to the EEA and the annual USD/EUR exchange rate for the 1999 to 2007 period. These export figures are based on the total amount of exports of benzoic acid, sodium benzoate and esters from the United States. The Commission's market investigation revealed that Emerald exports all three of these products to the EEA, although sodium benzoate and benzoic acid appear to account (at least for the years 2006 and 2007) for the majority of the total US exports to the EEA. Regardless of the exact split between the different products, however, under the assumption that the US and EEA markets are integrated, it would be expected that the US producers would be increasing their exports to the EEA, as the USD/EUR exchange rate decreased by more than 30% from 2001 to 2007. The US exports to the EEA, however, decreased by more than [30-40]*% during that period and by over [50-60]*% during the last nine years. It thus appears that the US producers do not pose a competitive constraint on the EEA producers of benzoic acid even under very favourable market conditions.

Figure 1: The relationship between the US Imports and the USD/EUR Exchange Rate

[...]*

Source: Eurostat

46. The assessment of the competitive strength of the US and Chinese producers is also confirmed by the management presentation given by DSP on their benzoic acid business to Arsenal that contains the following position of producers in the different geographic areas in 2006:⁸

	Europe	Americas	Asia
DSM	++++	++	++
Kalama	-	+++	-
Velsicol	++	++++	+
Wuhan	-	+	++++

⁸ Slide 48 of "Management presentation Velsicol" that was included in Arsenal/Velsicol's email "FW: Hamlet: Management presentations" of 19 November 2007 02:51.

Others - + +++

47. It is clear from those figures that both the US producer, Emerald and the Chinese producer, Wuhan are considered as not having any presence in *the EEA*. As neither of those two players has significantly increased its sales in the EEA since 2006, it follows that their position has not changed. In addition to providing evidence that neither Wuhan nor Emerald constrain EEA-based producers, those figures also show that DSM, and Velsicol to some extent, are the only players that have some global reach, as the other players are basically non-existent outside of their home markets. In particular, Emerald appears to only have a significant market presence in the Americas, while Wuhan is essentially present in Asia and to a very limited extent in the United States. Velsicol appears to be only present in the EEA and the Americas regions, where its plant was located, and its position in Asia is limited.
48. In response to the Statement of Objections, the parties contested the Commission's finding that the relevant market is not wider than the EEA due to Commission's finding that neither the US producer, Emerald, nor the Chinese producers *are* currently present in the EEA. The parties argued that the EEA market cannot constitute a separate market, separate from the rest of the world, in a market where significant trade flows of benzoic acid take place.
49. While it is accepted large international trade flows of benzoic acid are consistent with a hypothesis that there may be a global market for benzoic acid, the key question is whether these trade flows can discipline the EEA producers in the event of price increases. As explained in Recital 44, both the US and the Chinese producers only have a very marginal presence in the EEA, and thus they cannot pose a competitive constraint on the EEA producers. Thus, the fact that the parties' competitors may export significant amounts of benzoic acid to regions other than the EEA is not relevant for assessing whether the relevant geographic market is wider than the EEA.
50. Similarly, the notifying party's argument that DSP and Velsicol sell more than 50% of their benzoic acid production outside of the EEA cannot be used as evidence for markets that are wider than the EEA, as the issue is not whether benzoic acid can be exported outside of the EEA, but rather whether benzoic acid that is produced outside of the EEA can be imported into the EEA and thus whether the non-EEA competitors can pose a competitive constraint on the EEA producers.

4.1.2.2. Transport costs and tariffs constitute barriers to entry to the EEA

51. The Commission's market investigations, as well as the parties' internal documents, show that contrary to the submission of the notifying party, transport costs and tariffs constitute important barriers to entry to the EEA market for Chinese and US suppliers of benzoic acid.
52. Based on the notifying party's estimation, the average transportation costs for benzoic acid from China to the EEA amount to approximately 11% to 12% of the average selling price of benzoic acid, whereas the average transportation costs within the EEA amount to only [...] for DSP and to [...] for Velsicol. Accordingly, the difference in transportation costs will give a competitive advantage of 4% to 8% to EEA based producers over their Chinese competitors.

53. With regard to the United States, the notifying party estimates that the average transport costs from the United States to the EEA amount to approximately [5-10]*% of the selling price of benzoic acid⁹. However, the notifying party's submission is based on transport between the US east coast and Europe, whereas the parties' US competitor, Emerald, is located on the US west coast. Accordingly, transportation costs for Emerald are significantly higher than those submitted by the notifying party, due to the longer travel time plus canal of Panama's taxes.
54. In addition, benzoic acid entering the EEA from both China and the United States is subject to a 6.5% duty. Accordingly, Velsicol and DSP, based in the EEA, have a competitive advantage in relation to transportation and tariffs of approximately 10% to 15% over their Chinese and US competitors within the EEA, and irrespective of other costs supported by producers of benzoic acid. This finding is also consistent with DSP's internal documents that estimate that Emerald and Wuhan's competitive disadvantages for selling into the EEA are EUR [100-200]* on the basis of an average price of EUR 1 000 per metric tonne of benzoic acid.¹⁰
55. The notifying party argued in its response to the Statement of Objections that the competitive advantage in relation to transport costs and customs tariffs enjoyed by EEA-based producers over their Chinese and US competitors must be considered in relation to the fact that Chinese manufacturers enjoy very significant cost advantages over their EEA competitors. The Commission's market investigation, however, revealed that neither Chinese nor US producers have an order of cost advantage vis-à-vis the parties that would offset their handicap of 10% to 15% resulting from transportation costs and tariffs as described in Section VI.A.4 that discusses the *barriers to entry*.
56. The results of the Commission's market investigation also revealed that the parties' competitors consider tariffs and transport costs (due to the locations of the plants) as important barriers to enter the EEA market.¹¹ One of the notifying party's competitors also pointed to transport costs being higher from its home market than the transportation costs submitted by the notifying party.
57. In addition, both Velsicol's and DSP's internal document also acknowledges that transportation costs and tariffs are important barriers for their competitors to penetrate the EEA. For example, Velsicol's foundations for the 2007 strategic plan, in which Velsicol notes that: *"The BA market is 25-30% oversupplied, excluding idled capacity in China. Prices (and margins) have been under pressure and actually lost ground as a result of record toluene prices. Rationalization of an existing merchant supplier or asset is needed to stabilize market economics and provide conditions for margin improvement. DSM has the strongest position due to proximity to basic feedstocks and favourable trading conditions across Europe and South America. Kalama [Emerald]*

⁹ Notifying party's reply to the Commission's request for information dated 22 August 2008.

¹⁰ Slide 9 "Value competitive disadvantages (production costs excluded) versus local producers on average price of €1000 per mt benzoic acid" of DSP's "Update Businessplan for Benzoic Acid (August 2006)".

¹¹ Response to Article 11 request to competitors- benzoic acid and sodium benzoate- 22 August 2008

has the most spare, active capacity but are geographically disadvantaged. The Chinese have more supply firepower with up to 50% of their capacity idled. Thankfully shipping costs ex-China are somewhat prohibitive."¹² Even with the United States, for example, freight appears to be a big issue, as when negotiating with Emerald, it was noted that: *"...freight is a significant cost element in the equations and makes the offer even less attractive."*¹³ DSP attributes its dominant position in Europe to transport costs and duties among other factors: *"DSM only true global player with no. 1 brand Purox B – Already dominant position in Europe – Protected by duties, low logistics costs, liquid supply, easy market access."*¹⁴

58. The notifying party's response to the Statement of Objections contests the finding of the Commission's market investigation that transport costs and tariffs constitute important barriers to entry. The notifying party submits that transport costs and tariffs are not prohibitive. The notifying party argues that if price were increased by 5% to 10% in the EEA, both Emerald and Wuhan would significantly increase their sales into the EEA given their current margins. To support that argument, the parties refer to competitors' response to the Commission's second phase market investigation.
59. Firstly, the notifying party quotes one of its competitor's response to the Commission's request for information that notes that: *"the cost of freight and duty is a barrier. Product is sold at or near break even margin and it is therefore not attractive to sell into the EEA"*. Based on that statement, the notifying party concluded that if the price were to be increased by 5% to 10% in the EEA, this competitor would be able to make a margin of EUR 50 to EUR 100, assuming a market price for benzoic acid of EUR 1 000, and thus would therefore have an incentive to sell more on the EEA market. However, the statement that: *"the product is sold at a near break margin"* refers to all three different products, namely, benzoic acid, sodium benzoate and benzoate plasticisers. Given that gross margins are substantially higher on sodium benzoate and benzoate plasticisers than on benzoic acid, it cannot be concluded that the lowest margin product is sold at near break even margin. In addition, the same competitor also explained to the Commission that it would be willing to increase its exports of benzoic acid into the EEA only if prices increased by a significantly higher percentage than 5% to 10%. Accordingly, the notifying party's conclusions cannot be accepted.
60. Secondly, the notifying party refers to Wuhan's submission to the Commission's request for information indicating that its margins amounts to EUR [...]*/tonnes in the EEA. Based on that submission, the notifying party claims that a price increase of 5% to 10% would lead to margins of EUR [...]*/tonnes to EUR [...]*/tonnes, which is significantly higher than the margins Wuhan obtains in Asia (currently EUR [...]*/tonne), North America (EUR [...]*/tonne) or South America (EUR [...]*/tonne), and thus it would be profitable for Wuhan to significantly increase its sales of benzoic acid in the EEA.

¹² Velsicol Growth Strategy: A Path Forward.

¹³ Arsenal/Velsicol's Email "Emerald Follow-up" of Wednesday, 21 June 2006, 10:20:37.

¹⁴ Slide 8 entitled "Regional market shares free market" of DSP's "Update Businessplan for Benzoic Acid (August 2006)".

However, Wuhan also indicates in its response to the Commission's request for information that its selling price amounts to EUR [...]*/tonne, which is approximately [...]*/% to [...]*/% higher than the price of the parties.¹⁵ Thus, even if prices increased in the EEA by 5% to 10%, they would still be lower than Wuhan's prices, and thus it is unlikely that Wuhan would significantly increase its sales in the EEA.

61. Thirdly, Wuhan indicated in its response to the Commission's questionnaire its net margins to be EUR [...]*/tonne in the EEA, EUR [...]*/tonne in the United States and EUR [...]*/tonne in South America. Those margins do not, however, appear to be correlated with the magnitude of its exports in the different regions of the world. Although Wuhan's margin is EUR [...]*/ less in South America than in the EEA, it exports approximately [10-20]*/ times more benzoic acid to South America than to the EEA. Similarly, although Wuhan's net margins are [comparable]*/ in the United States and the EEA, it exports [0-10]*/ times more to the United States than to the EEA. Accordingly, even in the unlikely situation where a price increase in the EEA would allow Wuhan to increase its margin in the EEA, it does not necessarily imply that its sales to the EEA would increase significantly.
62. Finally, the notifying party submitted in its response to the Statement of Objections and also during the Oral Hearing that, in October 2008, Velsicol received a quote for *bulk* supplies from Wuhan for delivery to Rotterdam. According to the notifying party, Wuhan indicated a price of EUR [...]*/ per tonne at Rotterdam, including transportation costs and tariffs. However, that quote is based on bulk supplies (namely, very large quantities) and thus says nothing about Wuhan's competitiveness with regard to the many small customers that the EEA producers are selling to. In that regard, it is important to note that the selling price to those customers was EUR [20-40]*/% higher*/tonne as Wuhan indicated in its response to the Commission's questionnaire (see Recital 60). That submission is also not consistent with other internal documents that are discussed in more detail in Section 6.1.4 and suggest that Wuhan's competitive structure relative to the parties is such that Wuhan cannot overcome the disadvantages due to transportation costs and tariffs that were discussed in Recital 54. In addition, despite the specific request made by the Commission, the notifying party has not substantiated that quote with any documentary evidence, and thus this argument cannot be accepted.
63. Based on those considerations, it should be concluded that transportation costs and tariffs constitute important barriers for Chinese and US competitors to penetrate the EEA market.

4.1.2.3. *Quality considerations, delivery and reliability*

64. The Commission's market investigation revealed that quality considerations constitute an important barrier to entry for the Chinese producers into the EEA market.
65. All the distributors that replied to the Commission's market investigation indicated that they purchase benzoic acid exclusively from EEA-based producers when they

¹⁵ Based on the parties' submission, the average selling price of DSP and Velsicol amounts to EUR [...]*/tonne and EUR [...]*/tonne respectively.

supply the EEA market. Similarly, all end-users in the EEA who replied to the Commission's market investigation indicate that they purchase benzoic acid exclusively from producers in the EEA.

66. A very limited number of customers indicated that they had purchased benzoic acid in the past from Chinese traders¹⁶. Those customers claimed that Chinese benzoic acid is of inferior quality compared to that produced by producers in the EEA, and they are thus not willing to switch to Chinese producers. One of those customers also indicated that benzoic acid is susceptible to "caking" when the product is imported over long distances from the United States and China¹⁷. In addition, although some customers indicated that they would consider purchasing products from China in order to diversify their benzoic acid supply, none of these customers has so far identified a suitable source outside the EEA.¹⁸
67. The Commission's market investigation also shows that only a limited number of customers consider that there are no difference between the benzoic acid of Chinese producers and that of EEA-based producers, or just small difference pertaining to the "granology and packaging". Most of the customers report that several factors differentiate the quality of Chinese and European benzoic acid. These factors are, for example, the smell, the purity, the melting point, the percentage of assay content (sulphated ashes), the water content and the colour value. Customers report that Chinese benzoic acid, including the one produced by Wuhan, have a strong odour (bad smell); contains more sulphated ashes¹⁹; have different colour content and they are less solvable than the ones produced by the parties. As a result, EEA customers are not willing to switch to Chinese suppliers even in the event of a price increase of 5% to 10% by EEA-based suppliers.
68. One of the parties' largest distributors submitted that the "normal" quality (technical grade) benzoic acid provided by the Chinese producers/traders is not good enough as customers in the EEA require benzoic acid with a typical value specified as 99.8% as a minimum whereas the purity level of Chinese benzoic acid, including the one offered by Wuhan, would only be in the range of 98%. For most of the technical applications, EEA-based customers consider that level of purity as not satisfactory. While for some applications, such as alkyd resins used for "road-paints", this lower purity grade benzoic acid could be workable, customers would not switch to these lower quality products unless their price were more competitive. This distributor reported, however, that despite the lower quality of Chinese benzoic acid, the final

16 Response to Article 11 Request to end users-benzoic acid and sodium benzoate- 22 August 2008- Question 21-24

17 Response to Article 11 Request to end users-benzoic acid and sodium benzoate-Question- 21-24; Response to Article 11 Request to distributors-benzoic acid, sodium benzoate and benzoate plasticisers- 22 August 2008-Question 42

18 Response to Article 11 Request to end users of benzoic acid and sodium benzoate 22 August 2008- Question 21-24.

selling price, including both transportation cost and tariffs, is higher than the one offered by EEA-based producers²⁰.

69. That distributor also reported that the technical grade benzoic acid offered by the parties is more or less comparable to the USP grade (ultra pure) benzoic acid produced by Wuhan. However, the price difference between those two products is very significant, Wuhan's USP grade benzoic acid being at least [20-30]*% more expensive²¹.
70. During the oral hearing on 27 October 2008, the parties acknowledged, in contradiction with their earlier submission, that benzoic acid with a purity grade of between 99.2% to 99.3%, the maximum that the Chinese producers can currently achieve in technical grade²², is not sufficient for the EEA market but only for the production of other downstream products, such as benzoate plasticizers. Although later on during the oral hearing they specified that for certain technical applications that purity level would be sufficient, they were not able to identify any of these applications.
71. Wuhan indicated in its response to the Commission's questionnaire that it had not been confronted with any quality issues when selling benzoic acid into the EEA and considers the quality of its benzoic acid as being broadly equivalent to that of the parties²³. That statement does not seem, however, to be supported by its sale volume in the EEA which have been significantly low for at least the last five years.
72. In addition, Wuhan's perception that the quality of its benzoic acid is as good as that of the parties is contradicted by its own response to the Commission questionnaire asking the following: "Despite the strength of the Euro against the US dollar, it appears that exports of benzoic acid and sodium benzoate from the EEA to the US and China are larger than imports from these regions into the EEA. How do you explain

²⁰ This distributor has reported that it received an offer from both Wuhan and one of the EEA-based producers for technical grade benzoic acid for January 2008. The price offered by Wuhan, despite its lower quality, was at least 3% higher than the one proposed by one of the two EEA-based producers for the same period. The average price from Wuhan (CIF Rotterdam) for the technical grade benzoic acid was calculated considering 20 Mts / 20ft container, ocean freight of approximately USD130 / Mt, USD/EUR exchange rate of 1.45 and 6.5% import duty.

²¹ The average price from Wuhan, considering 20 Mts / 20ft container, ocean freight of approximately USD130 / Mt, USD/EUR exchange rate of 1.45% and 6.5% import duty would give CIF Rotterdam price that is 24% higher for the USP grade than the average price from one of the EEA-based producer for the same period.

²² Based on the parties' submission, "Keynote Memo", the purity level of Chinese technical grade benzoic acid varies between 98.8% and 99.3%.

²³ See Wuhan's response to Questions 12 and 13 of the Commission's request for information 22 August 2008. Wuhan indicated that it had not been confronted with any difficulties in supplying benzoic acid and sodium benzoate in the EEA due to quality issues/considerations[...].

this?" Wuhan replied to this question by submitting that the qualities of EEA products are higher²⁴.

73. Wuhan also perceives the quality of its benzoic acid to be significantly higher (five out of five) than that of other Chinese producers'[...]*. Considering that Wuhan's quality is today perceived by customers in the EEA as not good enough, it can be concluded that the quality of benzoic acid produced by other Chinese producers is even less satisfactory for EEA-based customers.
74. That lower quality of Chinese benzoic acid has also been confirmed by Arsenal as recently as 18 January 2008 in its due diligence commercial assessment of DSP: "*With only one regional supplier of BA, customers may make a greater effort to attract other competitors to the region. Though there is a little price difference between the different BA suppliers, the AP producers still do not have an equivalent quality.*²⁵ *However, given a potential growth of market share in Europe, they may accelerate their quality improvements*".
75. As regards the question of future quality improvement, while internal documents of the notifying party, as well as their customers, consider that the quality of Chinese benzoic acid could be improved during the next five years, Wuhan's current price in the EEA is already higher than the one of the parties despite its lower quality. In addition, even if Wuhan were to undertake these quality improvements, it is not clear whether these improvements would be fast enough and, more importantly, whether Wuhan could overcome the current negative perception regarding the quality of its benzoic acid to be an effective constraint on the merged entity in the event that it decided to raise prices. Even if Wuhan could improve the quality of its benzoic acid and overcome the negative perceptions, it is still not clear, due to transportation costs and tariffs, that its price could be as competitive as Emerald's, which does not currently suffer from any quality issues and has only a marginally higher market share in the EEA than Wuhan.
76. Finally, the Commission's market investigation also revealed that EEA-based customers consider Chinese suppliers as less regular and reliable in terms of delivery than EEA-based suppliers²⁶. Some distributors also indicated that if they were to purchase products from Chinese suppliers, they would need to have an additional

24 See Wuhan's reply to Question 36 of the Commission's request for information 22 August 2008

25 AP stands for Asia-Pacific (that is to say, the Chinese producers).

26 Response to Article 11 Request to end users of benzoic acid and sodium benzoate 22 August 2008-Question 21-24; Response to Article 11 Request to distributors of benzoic acid and sodium benzoate and benzoate plasticisers 22 August 2008-Question 24-28. While a large number of customers were unable to evaluate whether Chinese suppliers were or not reliable in terms of delivery due to their lack of experience with Chinese suppliers, most of the customers who replied indicated that they consider that buying benzoic acid from Chinese suppliers will give rise to a risk of delivery.

stock of several months which would require additional capital investment and would accordingly increase the final price of the products²⁷.

4.1.2.4. Pricing analysis

77. The Commission also collected pricing data from the parties and its US competitor, Emerald, in order to perform pricing analyses. In particular, the Commission initially obtained transaction-level data at the invoice level from the parties for the January 2005 to March 2008 period on all their sales of benzoic acid to investigate how wide the geographic market for merchant sales of benzoic acid is. In Phase II, the Commission obtained additional transaction-level data at the invoice level from DSP for the January 2002 to December 2005 and April 2008 to July 2008 periods and from Velsicol for the January 2003 to December 2005 and April 2008 to July 2008 periods. In addition, the Commission also obtained this data in Phase II from Emerald for the January 2002 to July 2008 period.
78. The Commission performed two types of pricing analyses. The first type of analysis looked at whether DSP and Velsicol set their prices in such a way that the EEA can be considered to be part of the same market as North America and Asia, and is based on the data received from DSP and Velsicol that was aggregated to country (namely with respect to individual countries that are Contracting Parties to the EEA Agreement) and region (namely the United States, the EEA and Asia) levels by month. The second type of analysis looks at whether the EEA and North America are part of the same market using the market prices that were created by aggregating over the sales of the merging parties and Emerald to country and region levels by month.²⁸
79. The Commission used two techniques in particular to examine the extent to which prices move together over time: (a) *correlation analysis*, and (b) *stationarity analysis*:
- (a) Correlation analysis measures the extent to which “high”, “medium” and “low” prices for one product are associated with “high”, “medium” and “low” prices for another product. If two prices move perfectly “in step”, then the correlation coefficient is one; if there is no association between the prices, the correlation coefficient is zero. To assess whether the prices of two regions are *sufficiently* correlated to be considered in the same market, it is typical to use as a benchmark the correlation between two geographic areas that are accepted as being in the same market.
- (b) Stationarity analysis uses sophisticated statistical tests to gauge whether the relative price of two products tends to revert to a constant value over time (that is to say, whether the relative price is “stationary”). Essentially, it is a test of

27 Response to Article 11 Request to distributors of benzoic acid, sodium benzoate and benzoate plasticisers 22 August 2008-Question 61-63. A certain number of distributors indicated that additional storage capacities would be necessary if they purchase benzoic acid from Chinese suppliers. Other distributors were not able to reply whether such an additional storage facility is necessary considering that they are not dealing with Chinese suppliers

28 Ideally, it would be best to replicate this analysis for the relationship between Asia and the EEA. However, the data from Wuhan (the main Chinese competitor) were not available to the Commission.

whether the “law-of-one-price” holds between the products: if products are close substitutes, then their prices can only deviate from each other for a short period of time. If this law does hold, then this is consistent with these products being in the same market (competing directly with one another) for competition purposes.

80. Both of those techniques have some shortcomings. For example, one important element to correlation analysis is controlling for common shocks to prices across the different products, such as common cost movements or currency movements, as it is possible that high correlations could be driven entirely by changes in these common elements (as the analysis is looking at movements in price levels). Given that stationarity tests are looking at relative prices, the role of these common elements is reduced to a minimum. Stationarity tests also do not require use of any benchmarks. At the same time, stationarity tests of relative prices with a number of structural breaks may result in misleading findings. Thus, it is important to look at the results of both correlation and stationarity analyses together.
81. The findings of the Commission's pricing analysis suggests that DSP's and Velsicol's prices of benzoic acid in the EEA, Asia and North America have been diverging over time, and there does not appear to be any close relationship between them. This finding is not consistent with a hypothesis that DSP and Velsicol set prices in such a way that there is a global market and instead points to an EEA-wide geographic market definition. In addition, the relationship between the EEA and North American market prices of benzoic acid is also not consistent with the EEA being in the same geographic market as North America. These findings are fully described in the Annex to the Statement of Objections.
82. In response to the Statement of Objections, the notifying party submitted its own statistical analysis that suggested that the market for benzoic acid is wider than the EEA. The Annex to this Decision, however, shows that: (i) the Commission's findings from the price correlation analysis in the Statement of Objections are robust to adjustments for toluene prices that were, according to the notifying party, driving the results of the Commission's price correlation analysis, (ii) the correlation analysis of margins (that the notifying party suggests is more appropriate than pricing analysis) also results in the same findings as the pricing analysis, and (iii) the notifying party's claims regarding the Commission's stationarity analysis are not based on any formal statistical tests.
83. In addition, the notifying party also noted in its response to the Statement of Objections that the critical loss analysis that it performed suggests that a 5% increase in price would be unprofitable if the merged entity were to lose 11.8% of its sales volume. However, the notifying party did not provide any elasticity estimates or any other evidence that would show how much sales would be lost as a result of a price increase of 5% to 10%. Instead, it only noted that (i) if the actual loss of sales from a 5% price increase in solid benzoic acid were greater than 11.8%, the market should be widened to include other regions, and (ii) the critical loss mentioned above suggests that if the absolute value of the elasticity of demand for benzoic acid in the EEA is greater than 2.3 at the current output level, the market should be widened. As a result, there is thus no direct evidence against which the notifying party's critical loss analysis can be assessed, and thus the Commission does not view this analysis as convincing. In this regard, it is noteworthy that although a large number of customers were unable to evaluate by how much prices in the EEA would have to rise in order

for them to decide to switch to a Chinese or US supplier, the majority of the customers who replied indicated that prices of benzoic acid in the EEA would need to be increased by more than 15% for such a switch to be worth considering.²⁹

84. On the bases of those considerations, it should be concluded, as the Commission concluded in the Statement of Objections, that the geographic market for benzoic acid is EEA-wide.

4.1.2.5. Conclusion - geographic market

85. The Commission's market investigation found that (i) Chinese imports of solid benzoic acid are largely considered to be less attractive to the EEA customers due to reliability and quality issues, (ii) sales from the US or Chinese producers in the EEA are minimal and each account for about a 1% to 3% market share, (iii) tariffs and transport costs constitute important barriers to entry into the EEA, and (iv) the prices in the different regions are not moving closely together as would be expected if there was a wider global market. It should therefore be concluded that the relevant geographic market for solid benzoic acid is EEA-wide.

4.1.3. Geographic market – liquid benzoic acid

86. Liquid benzoic acid solidifies at a certain temperature and thus can only be transported in heated containers. Based on the notifying party's submissions, the maximum distances over which liquid benzoic acid can be transported is limited to between 1 200 km to 2 000 km.
87. The results of the Commission's market investigation confirmed the submissions of the notifying party. Accordingly, it appears that the geographic market for liquid benzoic acid is narrower than the EEA. However, considering that the notifying party's activities do not overlap with regard to the market for liquid benzoic acid, the exact geographic market definition for liquid benzoic acid may be left open in this Decision as it does not affect the competitive assessment of the proposed transaction.

4.2.SODIUM BENZOATE

4.2.1. Product market

88. Sodium benzoate is a sweet and white solid also known as the salt of benzoic acid. It is produced by reacting benzoic acid with sodium hydroxide to make a water-based solution. The salt crystals are then isolated by evaporating the water. The salt is produced in either a powder or granular form.³⁰

29 Response to Article 11 Request to end-users of benzoic acid and sodium benzoate 22 August2008- Question 19. Response to Article 11 Request to distributors of benzoic acid, sodium benzoate and benzoate plasticisers 22 August2008.

30 Potassium and calcium benzoate are produced in the same way by reacting benzoic acid with potassium hydroxide and calcium hydroxide respectively.

89. The production of sodium benzoate does not require sophisticated equipment. Around 80 per cent of the cost of producing sodium benzoate is accounted for by benzoic acid. Sodium benzoate can be produced using either liquid or solid benzoic acid, and the quality or grade of benzoic acid used does not materially affect the quality of the sodium benzoate. The reason is that the production process of sodium benzoate allows for the removal of impurities (for example, by filtration).
90. Sodium benzoate is mainly used as an antimicrobial preservative in food and soft drinks (called E211). The difference between benzoic acid and sodium benzoate for use as a preservative is that sodium benzoate is soluble in water whereas benzoic acid is not. Accordingly, if an end-user needs to dissolve a preservative into a medium, sodium benzoate may be used but benzoic acid cannot.³¹
91. Sodium benzoate as a preservative in food and beverages is used mostly in acidic foods such as salad dressings, preserves, marmalades, pickles, and in carbonated and non-carbonated soft drinks and juices. The efficacy of sodium benzoate as a food preservative is dependent on the pH value of the food, working best in acid environments of a pH below 6.
92. Sodium benzoate is also used in a range of other end-use applications. It is used in pharmaceutical products (for example, as a preservative in liquid medicines, as an antimicrobial agent in edible coatings and for specific therapeutic purposes³²); in the automotive industry (for example, as an anticorrosive additive to antifreeze coolants); as a clarifier for plastics (as a nucleating agent); personal care (for example, mouthwashes); household cleaning products; and pyrotechnics (it is the powder which imparts a whistling noise when compressed into a tube and ignited).
93. The notifying party submitted that a large part of sodium benzoate sales are for food and beverage preservatives, and that sodium benzoate is one of a number of antimicrobial preservatives in the food and drink industry, many of which perform similar functions in ensuring the safety of food by inhibiting the growth of moulds, yeast and bacteria. According to the notifying party, the closest alternative antimicrobial preservatives to sodium benzoate include (i) potassium and calcium benzoates and (ii) sorbates (mainly sorbic acid, potassium sorbate and calcium sorbate). The notifying party submitted that European Parliament and Council Directive 95/2/EC of 20 February 1995 on the use of additives other than colours and sweeteners ³³, aggregates sodium, potassium and calcium benzoates (and benzoic

31 This is why beverage manufacturers use sodium benzoate instead of benzoic acid, because benzoic acid would just sink as a solid to the bottom of the can or bottle and would therefore be ineffective as a preservative. That is also why sodium benzoate is used in technical applications, such as anti-freeze as both a preservative and an anti-corrosion additive.

32 In pharmaceutical applications, sodium benzoate may be used where benzoic acid is not used because sodium benzoate is soluble in water and can thus be dissolved into a medium (hence sodium benzoate's use in liquid medicines and in coatings, where the coating is originally formulated and applied as a liquid which then becomes a solid coating).

33 Annex III of the Directive No 95/2/EC "Conditionally permitted preservatives and antioxidants" OJ L 61, 18.3.1995, p. 20.

acid) together on the basis that they all have identical preservative capability and can all be used in exactly the same food and drink applications. It argued that sodium benzoate can be replaced by other types of benzoates and sorbates, particularly potassium sorbate, in all of sodium benzoate's food and drink applications. Accordingly, it considered that the market should be defined to include benzoates and sorbates on the basis that they are close substitutes in similar applications.

94. The Commission's market investigation confirmed that a large percentage of sodium benzoate sales are used as preservatives in the food and beverage industry (from 50 % to 85%).³⁴ However, the results of the market investigation did not confirm the notifying party's submission that the product market for sodium benzoate should be defined to include sorbates, given the existence of important limitations to demand-side substitutability.

4.2.1.1. Benzoates

95. With regard to potassium benzoate and, in particular, demand substitutability between potassium benzoate and sodium benzoate, the Commission's market investigation revealed that these products normally have similar end-use applications and efficacy, but that in general potassium benzoate is not used as a substitute for sodium benzoate because it is more than 10% more expensive than sodium benzoate.³⁵
96. Concerning supply substitutability between sodium benzoate and potassium benzoate, one producer of sodium benzoate considered that a sodium benzoate plant can be easily configured to produce other benzoates, whilst another stated that, in spite of the use of different production technologies, sodium benzoate equipment can be used for the production of other benzoates.³⁶
97. In addition, virtually no potassium benzoate or calcium benzoate is sold in the EEA. In particular, according to the notifying party, potassium benzoate is sold almost exclusively in North America, where a demand exists for products, such as drinks, without sodium, and there are no producers of potassium benzoate in the EEA. The notifying party is also not aware of any sales of that product in the EEA.

4.2.1.2. Sorbates

98. With regard to sorbates, the Commission's market investigation showed that sodium benzoate is not, or only to a limited extent, constrained by sorbates and thus substitutable with these products. This is because the demand for sodium benzoate or sorbates is determined by a number of very specific factors, such as the taste and sensory properties of the end-product, the anti-microbial and technical properties of the preservative and its price.

34 Responses of competitors to question 12 of questionnaire in Phase II of 22 August 2008. Response of the parties to question 41 of questionnaire in Phase II of 22 August 2008.

35 Responses of competitors to questions 12/13 of questionnaire in Phase II of 22 August 2008.

36 Responses of competitors to questions 31 and 32 of questionnaire in Phase I of 20 June 2008.

99. A producer of sodium benzoate indicated that the use of sorbates as opposed to sodium benzoate imparts a flavour and a different texture to the food or beverage product, sodium benzoate providing a crisp texture, whilst sorbates give a softer texture. Several respondents confirmed that sodium benzoate has a more bitter taste than sorbates. The impact of sorbates on the flavour and sensory properties of the end product was confirmed by a large user of preservatives in the beverage industry, which expressed reluctance to switch from sodium benzoate to sorbates, as the latter would change the taste of the soft drink it produces.³⁷
100. With regard to the microbial properties of sodium benzoate and sorbates, a large number of respondents stated that each of these products is effective against certain bacteria, yeast and moulds, depending on the pH of the end product. Sorbates are active in a pH range 3-6, whereas sodium benzoate is active in a pH range 2.5-4.5. A large user of preservatives in the beverage industry confirmed that a switch in the past from sodium benzoate to sorbates led to a weakening of preservative properties and thus to cases of spoilage for certain beverage types.³⁸
101. As to the technical properties of the two preservatives, some respondents pointed out that sodium benzoate has higher solubility in water than sorbates, and another that it is soluble in alcohol whereas sorbates are not, thus rendering them inappropriate for certain applications such as painting.³⁹
102. Some respondents to the Commission's market investigation explained why they do not and would not indistinctively use sodium benzoates, other benzoates or sorbates in the production of their end product. An end-user stated its unwillingness to switch between these different preservatives even if the price of sodium benzoate increased by 5% to 10% because it would require a total reformulation of the end product.⁴⁰ A large end-user of sodium benzoate in the beverage industry confirmed that a switch of preservative would require a change in the formula of every drink around the world and that it would not switch preservative even in the case of a price increase of sodium benzoate.⁴¹ Therefore, it should be considered that the fact that Directive 95/2/EC groups, for legislative purposes, sorbates and benzoates as conditionally permitted preservatives in Annex III to that Directive, does not mean that, from an end-user perspective, they all have identical preservative capability and can be readily used as substitutes in the same food and drink applications.
103. Finally, an overwhelming majority of respondents to the Commission's market investigation stated that the price of sorbates is generally twice as high as that of

37 Response of competitor and customers to question 7 of questionnaire in Phase II of 22 August 2008; minutes of telephone conversation of 15 September 2008 with customer.

38 Response of customer to questions 17-18 of questionnaire in Phase I of 20 June 2008; response of customer to questions 13-14 of questionnaire in Phase II of 22 August 2008.

39 Responses of customers to question 7 of questionnaire in Phase II of 22 August 2008.

40 Response of customer to questions 16-19 of questionnaire in Phase I of 20 June 2008.

41 Response of customer to question 20 of questionnaire in Phase I of 20 June 2008.

sodium benzoate. The market investigation also showed that, taking into account the net use of sodium benzoate and sorbates per unit, the latter remain a more expensive product in the few applications in which it can replace sodium benzoate. A large end-user of sodium benzoate in the beverage industry stated that not only is potassium sorbate more expensive per kilogramme, but it would also need to be used in greater quantities. Another customer said that the same amount of sodium benzoate and sorbates is needed and thus that the cost of using sorbates is double the price.⁴²

104. With regard to supply-side substitutability, the Commission's market investigation did not produce definite results. Whilst one producer of sodium benzoate considered that a sodium benzoate plant can be easily configured to produce sorbates, another sodium benzoate producer stated that it could not provide information concerning sorbates for lack of knowledge. For its part, one producer of sorbates stated that benzoates and sorbates cannot be produced on the same production lines and machinery because of the need to use different technology.⁴³

4.2.1.3. Conclusion - product market

105. Accordingly, the proposed transaction does not give rise to competition issues on the narrowest possible market of sodium benzoate, and thus it is not strictly necessary to assess whether sorbates, calcium benzoate and potassium benzoate are part of the same market as sodium benzoate. This conclusion is also consistent with the notifying party's response to the Statement of Objections that noted that the question of whether or not the relevant product market includes sorbates, calcium benzoate and potassium benzoate should not be decisive for the outcome of the competitive assessment. Thus, the question can be left open as to whether calcium benzoate and potassium benzoate belong to the same product market as sodium benzoate.
106. As regards sorbates, the absence of demand substitutability due to the significant differences in taste, sensory, anti-microbial and technical properties, as well as price, largely curbs any possible, non-confirmed, supply substitutability between sodium benzoate and sorbates. It should therefore be concluded that sodium benzoate constitutes a separate market from sorbates.

4.2.2. Geographic market

107. The notifying party considered that the relevant geographic market for sodium benzoate covers at least producers in the EEA, the United States and Asia, which account for virtually all global production. It submitted a number of arguments in support of that proposal: (i) the world's main producers of sodium benzoate are focused on international export sales; (ii) exports of sodium benzoate from China have grown significantly in recent years and this trend will continue; (iii) barriers to trade, namely transport costs and customs tariffs, are very low; and (iv) product quality considerations are not a barrier to trade.

⁴² Responses of customers to question 22 of questionnaire in Phase I of 20 June 2008; responses of customers to question 11 of questionnaire in Phase II of 22 August 2008.

⁴³ Responses of competitors to questions 31 and 32 of questionnaire in Phase I of 20 June 2008.

108. The results of the Commission's market investigation are not conclusive: while there are some factors that point towards an EEA-wide market, there are also factors that are consistent with markets that are wider than the EEA. As shown in Section VI.B that discusses the competitive assessment of the sodium benzoate market, the proposed transaction does not give rise to any competition issues even on the narrowest EEA-wide market. Thus, the question can be left open as to whether the geographic market is wider than the EEA. For the sake of completeness, the remainder of this section discusses the key results from the Commission's market investigation.

4.2.2.1. Imports from the United States and China

109. The Commission's market investigation revealed that most EEA customers source their supplies from producers based in the EEA and that the parties' main competitors sell most of their output in their respective home markets. This is in line with the market positions of the different players, as Wuhan and other Chinese competitors account for [30% to 35]% of the EEA market and Emerald's market presence in the EEA is marginal.
110. As set out in Recital 45 that discusses Emerald's exports of benzoic acid, sodium benzoate and esters to the EEA during the last nine years, exports of sodium benzoate and benzoic acid decreased by [40-50]*% over the last nine years even if the US producer has been faced with favourable exchange rates. It thus appears that Emerald does not pose a competitive constraint on the EEA producers of sodium benzoate even under very favourable market conditions.
111. Contrary to benzoic acid, the Chinese producers have been increasing their presence in the EEA over time: based on the notifying party's submission, their combined sales of benzoic acid, sodium benzoate and esters increased by over 400% between 1999 and 2007 and currently account for [30% to 35]% of the EEA market. As discussed in Recital 43, given that around 95% of the exports from China are imports of sodium benzoate, this implies that the increase of exports can be mostly attributed to sodium benzoate. While this is consistent with the hypothesis that the market for sodium benzoate may be wider than the EEA, it does not rule out that the Chinese competitors are only pricing to the market (that is to say, that the Chinese competitors follow the price increases of the EEA competitors rather than put downward price pressures on the EEA competitors). Thus, the evidence of the increased market share over time must be interpreted in combination with the pricing evidence (see Recital 125).

4.2.2.2. *Transport costs and customs tariffs*

112. The notifying party submitted that transport costs and customs tariffs are very low and do not therefore pose a barrier to imports into the EEA from China and the United States.
113. The Commission's market investigation did not confirm that submission. The parties' main competitors in China and the US provided actual data on their average freight cost from their country to the EEA, which amounts to [5-10]*% and [5-15]*% respectively of the export price. To this freight cost, inland transport cost to the port of export must be added.

114. Based on an estimate submitted by the notifying party,⁴⁴ the average transport costs for exports of sodium benzoate from China to the EEA amount to approximately 9% to 10% of the average export price, whereas the average transport costs within the EEA amount only to 2% to 3%. Accordingly, based on that estimate, the difference in transport costs between EEA domestic sales and exports to the EEA will give a competitive advantage of 7% to 8% to EEA-based producers over their Chinese competitors.
115. With regard to the United States, the notifying party estimated that the average transport costs for exports of sodium benzoate from the United States to the EEA amount to approximately [5-10]*% of the average export price. However, the notifying party's estimate is based on transport between the US East coast and Europe, whilst the parties' US competitor, Emerald, is located on the US West coast. This means that the transport costs that Emerald must bear to export to the EEA are higher than those estimated by the notifying party (due to longer distance and canal of Panama's taxes). This was also confirmed in an internal document by Arsenal/Velsicol with regard to Emerald, stating that: "*Washington State is not ideal location for US production – creates freight disadvantages.*"⁴⁵
116. In addition to export transport costs, imports into the EEA from China and the United States are subject to a customs duty of 6.5% of the export price which must also be added to the cost of exporting sodium benzoate to the EEA. The barrier to exports posed by customs duties is recognised in an internal document by Arsenal/Velsicol with regard to Emerald stating that there is: "*no duty in their cost structure for NAFTA sales*"⁴⁶, and that Emerald is: "*better positioned on Coke Puerto Rico bid due to duty advantage*".⁴⁷ Similarly, Velsicol recognised in an internal document the obstacle posed to its own exports to Asia and the United States not only by differences in costs of manufacturing but also by ocean freight and customs duties: "*direct competition against Chinese producers in this region [Asia Pacific] (BA&Salts) is unrealistic due to differences in costs to mfg. and supply chain (freight)*".⁴⁸
117. The Commission's market investigation confirmed the existence of a competitive advantage for EEA-based producers in the EEA. Thus, the majority of respondents stated that transport costs and/or customs tariffs constitute a constraint on imports into the EEA from China and the United States. One competitor considered it necessary to have a production facility within the EEA in order to sell sodium benzoate effectively, and that a warehouse alone would not be of any benefit because of the existence of freight and tariff barriers. The parties' main competitors indicated that they export less sodium benzoate to the EEA than to other geographic areas because (i) transport costs

44 Notifying party's response to the questionnaire in Phase II of 22 August 2008.

45 Velsicol STRAP Review with Arsenal Capital Partners, 11 September 2007.

46 Velsicol STRAP Review with Arsenal Capital Partners, 11 September 2007.

47 Plastic Additives & BA Derivatives.

48 Arsenal Review – Chemical specialties of 2 June 2006, "Asia Pacific Growth Plan Summary"

and tariffs are higher to the EEA than to other regions and (ii) strong competitors are present in the EEA. In that regard, one competitor specified that the high freight and tariff barriers, as well as the presence of strong local production, make the sale of product to the EEA unattractive from a profit perspective.⁴⁹

118. Those considerations indicate that EEA-based Velsicol and DSP enjoy a competitive advantage in relation to transport costs and tariffs of approximately 10% to 15% over their Chinese and US competitors for sales of sodium benzoate in the EEA, irrespective of other cost advantages or disadvantages. This is also consistent with DSP's internal documents that estimate that Emerald's and Wuhan's competitive disadvantages for selling into the EEA are EUR[0-500]* based on an average price of EUR[...] per metric tonne of sodium benzoate.⁵⁰
119. In response to the Statement of Objections, the parties argued that the competitive advantage in relation to transport costs and customs tariffs enjoyed by EEA-based producers over their Chinese and US competitors must be considered in relation to the fact that Chinese manufacturers enjoy very sizeable cost advantages over their EEA competitors (for example, the existence of lower labour costs and government subsidies). The parties also argued that, despite transport costs and customs duties also applying to their own exports, they export at least half of their production of sodium benzoate. They finally submitted that a relative disadvantage of 10% to 15% in transport costs and customs tariffs can never constitute an absolute barrier to trade from China.
120. However, regardless of any hypothetical cost advantages which Chinese producers of sodium benzoate might enjoy as compared to EEA-based producers, the parties themselves have recognised in internal documents the additional obstacle that ocean freight and customs duties present to export sales and the advantage that their absence confers.

4.2.2.3. *Quality and delivery considerations*

121. The Commission's market investigation revealed that quality considerations may pose a barrier to imports into the EEA of sodium benzoate from China. Whilst sodium benzoate produced in China is perceived by some EEA customers to raise no quality concerns or to raise them to a lesser extent than for benzoic acid, a significant number still express unwillingness to purchase it. For example, some EEA customers indicated that they would only be willing to switch to a Chinese supplier in the event of a price increase of 10% by EEA-based suppliers, while some others indicated that the price increase would have to be higher than 25%.⁵¹

⁴⁹ Responses of competitors to questions 22-23 of questionnaire in Phase II of 22 August 2008.

⁵⁰ Slide 9 "Value competitive disadvantages (production costs excluded) versus local producers on average price of €[...] per mt benzoic acid" of DSP's "Update Businessplan for Benzoic Acid (August 2006)".

⁵¹ Responses of customers to question 33 of questionnaire in Phase I of 20 June 2008; responses of customers to question 19/21 of questionnaire in Phase II of 22 August 2008.

122. The Commission's market investigation showed that some EEA customers specify the factors that determine the quality of sodium benzoate as including the purity, assay, colour, particle size, smell and general consistency. A number of customers consider that there are quality differences between sodium benzoate produced by EEA and Chinese producers and that the latter is of inferior or insufficient quality. One customer considered that there is a little difference in granulometry and packaging; another that the quality is not as good as regards purity, colour and packaging; another that the Chinese product has a smell, is dusty and that its quality will not improve in the next five years. One distributor explained that its customers are fully satisfied with the quality of the European product and are ready to pay a little extra for this, stating that the Chinese product is hardly soluble and has a characteristic smell.⁵²
123. To a lesser extent there also appear to be problems with regard to the security of supply and reliability of delivery, as the Commission's market investigation revealed that some EEA customers consider that Chinese suppliers are less reliable in terms of delivery than EEA-based suppliers. Some customers also indicated a general risk of delivery problems or of past experience with irregular supply. A large end-user of sodium benzoate in the beverage industry thus explained that local presence is very important because of reduced lead-times and assurance of supply, a view which was confirmed by other customers.⁵³
124. In response to the Statement of Objections, the parties suggest that although the Chinese suppliers still suffer from a reputation problem due to inferior quality and unreliability in the past, there are many customers who already buy sodium benzoate from China and are satisfied with its quality. That statement may be accepted. However, it does not rule out that a price increase of 5% to 10% may be profitable, as there may not be enough customers that do not currently buy any sodium benzoate from the Chinese producers that would be willing to switch to the Chinese producers.

4.2.2.4. Pricing analysis

125. The Commission collected pricing data from the parties and Emerald in order to perform a pricing analysis much like it did for the benzoic acid market. The findings of the Commission's pricing analysis suggest that DSP and Velsicol's prices of sodium benzoate in the EEA, Asia and North America have been diverging over time, and there does not appear to be any close relationship between them. That finding is not consistent with a hypothesis that DSP and Velsicol set prices such that there is a global market and instead points to an EEA-wide geographic market definition. In addition, the relationship between the EEA and North American market prices of sodium benzoate is also not consistent with the EEA being in the same geographic market as North America. These findings are fully described in the Annex to the Statement of Objections.

⁵² Responses of customers to questions 40 and 42 of questionnaire in Phase II of 22 August 2008.

⁵³ Responses of customers to questions 34, 39 and 57 of questionnaire in Phase I of 20 June 2008; responses of customers to questions 23, 62 and 63 of questionnaire in Phase II of 22 August 2008; follow-up emails.

126. In response to the Statement of Objections, the notifying party submitted its own pricing analysis that suggests that the market for sodium benzoate is wider than the EEA. However, the Annex to this Decision shows that much of the notifying party's analysis is incorrect with the exception of its assessment of DSP's EEA/Asia relative prices. There is, thus, only very limited evidence that would be consistent with the geographic market being wider than the EEA. In any event, as the competitive assessment shows that the proposed transaction does not give rise to any competition issues on the narrowest geographic market that is defined as the EEA, the question can be left open as to whether the geographic market is wider than the EEA and also includes Asia.

4.2.2.5. *Conclusion - geographic market*

127. The Commission's market investigation showed the existence of some factors pointing to a possible definition of the relevant geographic market for sodium benzoate as EEA-wide.
128. However, given that the exact definition of the relevant geographic market for sodium benzoate does not affect the competitive assessment of the proposed transaction with regard to this product, the definition of the geographic market for sodium benzoate can be left open.

4.3. BENZOATE PLASTICIZERS

129. Benzoate plasticizers are a downstream product to benzoic acid. While Velsicol is active in this product market, DSP is not. Velsicol produces benzoate plasticizers within the EEA from its plant in Estonia. In China, Velsicol has a joint venture with Wuhan for the production of plasticizers. In the United States, Velsicol produces plasticizers while being supplied with benzoic acid from Emerald.
130. Plasticizers are organic chemicals that are added to polymers in order to increase the flexibility and toughness of the final product. Plasticizers are primarily used in the manufacture of flexible polyvinyl chloride ("PVC"), which accounts for 80% to 90% of world plasticizer consumption. Plasticised PVC is used in a wide range of applications such as medical tubing, footwear, stationery goods, flooring and wall-coverings, electrical cable insulation, clothing and toys.
131. Plasticizers may be grouped into several categories depending on their chemical content (but not usages): phthalates (organic chemicals produced from oil); aliphatics; epoxy; trimellitates; polymeric; phosphates; and others (which include benzoate plasticizers). Benzoate plasticizers, the sector in which Velsicol is active, represent approximately 1.1% of the overall plasticizer market including all kinds of plasticizers.
132. Benzoate plasticizers are manufactured from a reaction of benzoic acid with various glycols or alcohols. Within benzoate plasticizers, there are various types of benzoate plasticizers including monobenzoates, dibenzoates, tribenzoates, tetrabenzoates and various blends of benzoates. Benzoate plasticizers are used in many of the same applications as other types of plasticizers.

133. The majority of Velsicol's plasticizer products fall within the category of di-benzoate plasticizers⁵⁴, although Velsicol also produces mono-benzoates, polymeric plasticizers and monomeric plasticizers at worldwide level. Nevertheless, Velsicol does not produce mono-benzoate plasticizers in the EEA and its sales of mono-benzoate plasticizers in the EEA are minimal⁵⁵. Velsicol also has no plans to develop its production of mono-benzoate plasticizers in the EEA. In addition, the Commission's market investigation confirmed the submission from the notifying party that mono-benzoate and di-benzoate plasticizers are not substitutable. Therefore, Section IV.C.I. principally focuses on the Commission's assessment on di-benzoate plasticizers.

4.3.1. Product market

134. The notifying party submitted that all plasticizers (including, for instance phthalates, polymeric, trimellitates, epoxy or benzoate plasticisers) should be considered to constitute one single product market as most plasticizers could be substituted by another plasticizer falling in a different category. To illustrate their submission, the notifying party submitted a list of customers won and lost by Velsicol in the period from 2003 to 2007⁵⁶. In particular, it indicated which proportion of business lost or won was due to switch to or from Emerald, therefore concerning di-benzoate plasticizers only, and which proportion corresponded to a switch related to change of use between di-benzoate plasticizers and another plasticizer (mainly phthalate plasticizers).

Sales of di-benzoate plasticizers won and lost by Velsicol worldwide – 2003-2007				
	2003-2004	2004-2005	2005-2006	2006-2007
Business won	[...]* t	[...]* t	[...]* t	[...]* t
<i>from Emerald*</i>	[50-60]**%	[60-70]**%	[50-60]**%	-
<i>from other plasticizers*</i>	[40-50]**%	-	[20-30]**%	[80-90]**%
Business lost	[...]* t	[...]* t	[...]* t	[...]* t
<i>to Emerald*</i>	[30-40]**%	[30-40]**%	[70-80]**%	[90-100]**%
<i>to other plasticizers*</i>	[50-60]**%	[60-70]**%	[20-30]**%	[5-10]**%

Source: Notifying party. * Total business won from Emerald or from other plasticizer producers, as well as total business lost to Emerald or other plasticizer producers might be inferior to 100% as for a proportion of business won or lost it was not possible to identify the information.

135. The table in Recital 134 illustrates that Velsicol and Emerald compete for di-benzoate plasticizers customers. However, the large majority of sales lost to or won from Emerald are attributed to customers not located in the EEA. In the period from 2006 to 2007, only [10-20]**% of total sales lost to Emerald concerned EEA customers.

54 The notifying party submitted that di-benzoate plasticizers account for 95.3% of its worldwide production of benzoate plasticizers, whereas mono-benzoate plasticizers account for 4.7% for the year 2007.

55 In 2006 and 2007, Velsicol's sales of mono-benzoate plasticizers in the EEA accounted for respectively [0-5]**% and [0-5]**% of its sales of benzoate plasticizers.

56 Form CO, pages 54 to 58.

Between 2003 and 2006, Velsicol did not lose to or gain sales from Emerald in the EEA.

136. That table also illustrates an important trend in the di-benzoate plasticizer market which was raised in the Commission's market investigation. The sales of di-benzoate plasticizers lost to the benefit of other plasticizers are considerably shrinking. In the period from 2003 to 2004, more than 50% of business lost was attributed to customers replacing di-benzoate plasticizers by other plasticizers. In the period from 2006 to 2007, only [5-10]*% of lost business was attributed to other plasticizers. In the EEA more specifically, in the period from 2006 to 2007 the parties did not report any loss of di-benzoate plasticizer sales to the benefit of another category of plasticizers. Loss of business in the EEA was only reported for the periods from 2003 to 2004 and from 2004 to 2005 to the benefit of Butyl Benzyl Phthalate (BBP)⁵⁷.
137. Such information is indicative that although di-benzoate plasticizers might constitute a substitute to other plasticizers, it is less likely that di-benzoate plasticizers can be substituted by other plasticizers. This information is also confirmed in the internal documents of Velsicol. For instance, a Velsicol presentation submits that: "*Environmental shifts will have greater impact: - shift from BBP to Benzoates in Europe due to labelling; Others will happen as Reach heats up*"⁵⁸. Another internal presentation also submits that there is a "*Strategic shift to increase sales in Europe – Favorable regulatory environment driving conversion, deselection of phthalates*"⁵⁹.
138. To evaluate the degree of substitutability of di-benzoate plasticizers and other plasticizers the Commission compared, in particular, (i) the technical properties of plasticizers, and (ii) the impact of the Community regulations regarding the usage of the different plasticizers.

4.3.1.1. Technical substitutability

139. Generally, not all plasticizers have similar characteristics, and it is highly unlikely that two plasticizers chosen randomly can substitute each other. They simply do not have the same solving properties. Conversely, it has been confirmed in the Commission's market investigation that plasticizers constitute a continuum in the sense that for a specific plasticizer there is generally another plasticizer which presents similar characteristics. In particular, the market investigation indicated that the technical substitutability of different plasticizers should be evaluated on the basis of their compatibility with the polymer molecules they are melted with.
140. The notifying party submitted that di-benzoate plasticizers are used in many of the same applications as other types of plasticizers. The SRI Consulting report of January

⁵⁷ The notifying party has also submitted that in 2008, three of their largest EEA-based and Turkish customers, producing PVC flooring, abandoned benzoate plasticizers to switch to BBP. (Annex 12-E of the Form CO).

⁵⁸ Response to Article 11 Request for Velsicol internal documents – Question 2 – folder 15.

⁵⁹ Response to Article 11 Request for Velsicol internal documents – Question 2 – volume 1 – folder 11.

2007 on plasticizers⁶⁰ more precisely indicated that di-benzoate plasticizers are primarily used in polyvinyl acetate-based (PVAc) emulsion adhesives, caulks and sealants, since they have moderate compatibility with polyvinyl chloride (PVC). According to the notifying party, PVC accounts for 80% to 90% of world plasticizer consumption. Therefore, di-benzoate plasticizers are not competing against other plasticizers for the bulk of plasticizers' usages.

141. The SRI report on plasticizers⁶¹ also indicated that the main plasticizers in competition with di-benzoate plasticizers are BBP and Di-n-butyl phthalate (DBP)⁶². More precisely, the SRI report on plasticizers specified that in the United States in 2005 (i) 94% of benzoate plasticizers were used for the production of PVAc emulsion adhesives, caulks and sealants; (ii) DBP is consumed primarily in PVAc emulsion adhesive, where it competes with BBP and di-benzoate plasticizers⁶³; and (iii) 55% of BBP is used to produce PVAc-based adhesive, caulks and sealants,⁶⁴ where di-benzoate plasticizers are the main competitors in this market.
142. The Commission's market investigation confirmed that BBP is the main phthalate plasticizer in competition with di-benzoate plasticizers, although several other phthalate plasticizers could be acceptable substitutes for di-benzoate plasticizers. Low molecular weight phthalate plasticizers principally have technical properties which replicate those of di-benzoate plasticizers⁶⁵. Plasticizer users confirmed in particular that BBP is the phthalate plasticizer which could technically replace di-benzoate plasticizers in most applications. In addition, some customers or producers of plasticizers indicated that for their specific productions other phthalate plasticizers could be used to technically replace di-benzoate plasticizers, namely Di-2-ethylhexyl Phthalate (DEHP), Diisobutyl phthalate (DIBP), Di-isononyl Phthalate (DINP), DBP. However, these phthalate plasticizers were generally identified by one customer or producer only, whereas BBP was the only phthalate plasticizer identified by the majority of market participants as a technical substitute to benzoate plasticizers⁶⁶.
143. In the course of the Commission's market investigation, no evidence was found that producers of adhesives, caulks and sealants could replace di-benzoate plasticizers by

⁶⁰ Annex 14-C of the Form CO. CEH Marketing Research Report – Plasticizers – January 2007.

⁶¹ Annex 14-C of the Form CO. CEH Marketing Research Report – Plasticizers – January 2007.

⁶² DBP is more marginal than BBP. Consumption of DBP is eight times smaller than production of BBP in the US.

⁶³ DBP is also largely used in cellulose lacquers according to the same report.

⁶⁴ BBP is also used to produce PVC flooring.

⁶⁵ Low molecular weight phthalates would account for approximately 25% of the phthalate plasticizer market.

⁶⁶ The majority of producers of plasticizers and end-customers considered BBP to be the closest substitute for benzoate plasticizers. Question No 14 of questionnaire to benzoate plasticizers customers, Phase II, and question No16 of questionnaire to benzoate plasticizer producers, Phase II.

other non-phthalate plasticizers on a large scale basis. The notifying party could only identify three companies in the EEA using non-phthalate plasticizers in place of di-benzoate plasticizers in the production of adhesives⁶⁷. One company submitted that Triacetin was an adequate substitute to di-benzoate plasticizers for its particular applications, and that it had switched entirely to Triacetin in 2008. Another one tested one non-phthalate plasticizer unsuccessfully, and was testing another one, having not yet switched away from di-benzoate plasticizers. The Commission could not confirm with the last company that it had actually replaced di-benzoate plasticizers successfully by alternative non-phthalate plasticizers. Ultimately, in the event that these three companies were to switch to alternative non-phthalate plasticizers, these examples are limited and all other producers of adhesives, caulks and sealants interviewed by the Commission confirmed that they were not aware of alternative plasticizers to replace di-benzoate plasticizers, although a few of them indicated that they might want to test non-phthalate alternatives (for instance, Triacetin) to reduce their dependency on Velsicol.

144. Contrary to the submission from the notifying party, it should therefore be concluded that benzoate plasticizers are not technically substitutable with all other plasticizers, but rather with a limited proportion of them, principally BBP and DBP. It also appears that some other phthalate plasticizers could technically replace benzoate plasticizers for particular applications, but on a less systematic basis. With regard to non-phthalate plasticizers, the Commission's market investigation found only limited information that alternatives to di-benzoate plasticizers were regularly used. In particular, tests are ongoing but it is not yet certain that they will be satisfactory in the long term.
145. The notifying party has submitted that by 2010 BBP will account for 0.8% of the total market for plasticizers, whereas benzoate plasticizers will account for 1.1%⁶⁸. DBP will account for a largely smaller share of the total market for plasticizers than BBP.

4.3.1.2. *Impact of Community regulations on substitutability*

146. The Commission market investigation raised the issue that phthalate plasticizers are under pressure from regulatory authorities as doubts exist as to the toxicity of these products. The SRI report on plasticizers confirmed this concern and concluded that: "*di-benzoates have better growth prospects than phthalate plasticizers; partly as a result of continuing environmental pressure on phthalates [...]*". The report also lists the continuing environmental concerns over the use of phthalate plasticizers as one of the main concerns for the plasticizer market.
147. Several examples were described in that report. For instance, in May 2005 a scientific study was published claiming to have found evidence of a correlation between the exposure of pregnant women to phthalates, mainly DEHP, DBP, DOBP and BBP, and alterations in the reproductive organs of their male offspring. Although those results were disputed, such studies cast doubts on the safety of phthalate plasticizers,

67 Email from the notifying party dated 29 October 2008 – 17:46 – Examples of switching away from di-benzoate plasticisers in non-flooring applications in the EEA.

68 Annex 12-E of the Form CO

including those which present technical characteristics similar to di-benzoate plasticizers.

Community regulations – CMR – REACH

148. In the European Union, dangerous substances are classified. The Commission was in charge of the CMR (Carcinogen, Mutagen, Reproductive toxin) classification, and all classification under Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances ("the Dangerous Substances Directive")⁶⁹. The European Chemical Agency is now in charge of the classification.
149. BBP, DBP and DIBP have been found to meet the criteria for CMR category 2 and 3 Reproductive agents, and have been included in Annex I to Directive 67/548/EEC. DEHP has been found to meet the criteria for CMR category 2. A substance classified in the CMR category 2 should be regarded as a reproduction hazard due to a strong presumption of toxicity. A substance classified in the CMR category 3 should be regarded as a cause for concern due to a possible reproduction hazards. DINP and Diisodecyl Phthalate (DIDP) do not have any current CMR classification.
150. Similarly, under Council Regulation 793/93 of 23 March 1993 on the evaluation and control of the risks of existing substances⁷⁰, the five main phthalate plasticizers, DINP, DIDP, DEHP, BBP and DBP have undergone a risk assessment. A special report on BBP was notably published in 2008⁷¹. That report confirms the classification of BBP according to Annex I to Directive 67/548/EEC, as a substance which may cause harm to the unborn children, and may generate possible risk of impaired fertility. In addition, BBP is classified as dangerous for the environment, in particular with regard to risks for surface water. Special reports were also published for DEHP and DBP which confirmed the CMR classification of these substances.
151. All substances falling under the category 1 and 2 reproductive hazards, therefore including BBP, DBP and DEHP can be added to Annex XIV to Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency (REACH)⁷². Annex XIV is a draft list of substances of high concern. If added to Annex XIV to REACH, these chemicals would be subject to "authorisation" by the European Chemical Agency. Firms using or proposing to market a product containing these toxins would need to

69 OJ 196, 16.8.1967, p. 1.

70 OJ L 84, 5.4.1993, p. 1.

71 Institute for health and consumer protection – Toxicology and Chemical substances – European Chemical Bureau, Ispra Italy – Benzyl Butyl Phthalate (BBP), Cas N° 85-68-7, EINECS N°201-622-7 – Risk assessment report – 2008.

72 REACH (Regulation (EC) No 1907/2006 on Registration, Evaluation, Authorisation and Restriction of Chemicals (Reach), establishing a European Chemicals Agency (OJ L 396, 30.12.2006, p. 1.) entered into force on 1 June 2007.

submit an analysis of possible substitutes. An authorisation will be granted if the applicant can demonstrate that the risk from the use of the substance is adequately controlled. If this criterion is not met, then such authorisation may also be granted if the socio-economic benefits outweigh the risks and there are no suitable alternative substances or processes available.

152. A number of concerns relating to the protection of consumers or the protection of workers manipulating phthalate plasticizers exist. This has resulted in Community legislation restricting the use of phthalate plasticizers in the Community.
153. In 2004, Community legislation prohibited the manufacture or sales of cosmetics containing DBP, DEHP and some other phthalates, based on their reproductive toxicity. Similarly, in July 2005, Community legislation placed a permanent ban on certain phthalates in toys and child care articles. Three phthalates under CMR classification No 2 – DEHP, DBP, and BBP – are banned in all toys and child care articles where the concentration exceeds 0.1% by mass of the plasticized material due to their CMR (Carcinogen, Mutagen, Reproductive toxin) properties. Three other phthalates – DINP, DIDP, and DNOP – (also at concentrations exceeding 0.1%) are banned from use in toys and child care articles for those articles that can be put in a child's mouth for precautionary reasons. Although those three phthalate plasticizers are not classified under the CMR classification, they have been banned for certain usages for precautionary reasons. In 2007, restrictions for certain plasticizers intended to come into contact with foods were imposed under Community legislation (Commission Directive 2007/19/EC⁷³ and Commission Regulation (EC) No 372/2007⁷⁴).
154. Such classification or restrictions on use can seriously damage the perception customers have of phthalates, as well as sales of those products containing phthalates. For instance, the SRI report on plasticizers indicated that the consumption of DBP has declined significantly in recent years due mainly to the changes in their classification and labelling. Similarly the special report on BBP published in 2008⁷⁵ indicates that the use of BBP in Europe considerably decreased between the late nineties (36 000 tonnes/year) and 2004 (19 500 tonnes/year) due to the labelling of BBP according to Directive 67/548/EEC. Similarly the use of BBP in food packaging has declined (for instance, cellulose films intended to come into contact with foodstuffs no longer

⁷³ Commission Directive 2007/19/EC of 30 March 2007 amending Directive 2002/72/EC relating to plastic materials and articles intended to come into contact with food and Council Directive 85/572/EEC laying down the list of simulants to be used for testing migration of constituents of plastic materials and articles intended to come into contact with foodstuffs (OJ L 91, 31.3.2007, p. 17)

⁷⁴ Commission Regulation (EC) No 372/2007 of 2 April 2007 laying down transitional migration limits for plasticisers in gaskets in lids intended to come into contact with foods (OJ L 92, 3.4.2007, p. 9)

⁷⁵ Institute for Health and Consumer Protection – Toxicology and Chemical substances – European Chemical Bureau, Ispra Italy – Benzyl Butyl Phthalate (BBP), Cas N° 85-68-7, EINECS N°201-622-7 – Risk assessment report – 2008.

contain BBP) as BBP has been removed from the list of products which can be used for such applications⁷⁶.

Market investigation

155. The Commission's market investigation has confirmed that phthalate plasticizers competing against di-benzoate plasticizers are less appreciated by customers, who increasingly want to offer phthalate-free products. In addition, customers prefer to avoid phthalate plasticizers which do not fall under the CMR classification considering the reputation attached to such products. All benzoate plasticizer producers confirmed this trend, whereas di-benzoate plasticizer customers have a different view depending on the products they manufacture. Those who manufacture PVC flooring are more likely to switch to phthalate plasticizers in the case of a price increase of benzoate plasticizers. This can notably be explained by the fact that several phthalate plasticizers are used to making PVC floors, and some of them are not substitutable by benzoate plasticizers. Therefore, PVC floors will contain phthalate plasticizers in any event. Conversely, customers who use di-benzoate plasticizers to make sealants or adhesives all submitted that although they could technically replace benzoate plasticizers by phthalate plasticizers, they would not do so because their customers want phthalate-free products.
156. The notifying party submitted that a number of EEA producers of adhesives, caulks and sealants still use phthalate plasticizers in their process⁷⁷. This information, however, does not contradict the trend, also observed by the notifying party, that a number of customers deselect phthalates to the benefit of di-benzoate plasticizers. In particular, those producers of adhesives, caulks and sealants who have abandoned phthalates to use di-benzoate plasticizers have all indicated that they would not switch back to phthalates because, as indicated in Recital 155, their own customers exert pressure on them to obtain phthalate-free products. In addition, the majority of competitors who do not currently use di-benzoate plasticizers in the production of adhesives, caulks and sealants have confirmed that they expect in the near future their own customers to exert pressure on them to obtain phthalate-free products⁷⁸.
157. PVC flooring accounts for approximately one quarter of sales of di-benzoate plasticizers in the EEA, whereas adhesives, caulks and sealants account for the remaining three quarters. It can, therefore, be roughly estimated that for one quarter of the sales of di-benzoate plasticizers in the EEA, phthalate plasticizers can be a substitute because producers of PVC flooring do not attach importance to the CMR classification of phthalates. Conversely, for approximately three-quarter of the sales of di-benzoate plasticizers in the EEA, customers would hardly switch to phthalate

⁷⁶ List of additives established under Annex III of the Commission Directive 2002/72/EEC of 6 August 2002 relating to plastic materials and articles intended to come into contact with foodstuffs (OJ L 220, 15.8.2002, p. 18) which relates to plastic materials and articles intended to come in contact with foodstuffs.

⁷⁷ Reply to the Statement of Objections – Annex 4.

⁷⁸ Questionnaire customers phthalate plasticizers 24 October 2008 – Question No 5.

plasticizers to replace di-benzoate plasticizers due to perception their own customers have of phthalates and due to the Community regulations applying to phthalates.

158. This information is also confirmed in the internal documents of Velsicol. For instance, a Velsicol presentation submits that: "*North American and EU [producers of adhesives and sealants] have adopted benzoate esters due to regulatory pressures and cost/performance benefits*"⁷⁹.
159. It should therefore be concluded that di-benzoate plasticizers and phthalate plasticizers are under different and opposing constraints, in particular those laid down in Community legislation and customer perceptions. Whereas customers consider di-benzoate plasticizers largely positively, they consider that phthalate plasticizers may cause health concerns in relation to their own products. The possibility to sell "phthalate-free products" creates a strong incentive for plasticizer customers to distinguish between phthalate and di-benzoate plasticizers.

4.3.1.3. Conclusion – product market di-benzoate plasticizers

160. The Community's market investigation confirmed the information contained in the SRI report on plasticizers. Di-benzoate plasticizers can be technically substituted by BBP or DBP principally. Other phthalate plasticizers can also substitute di-benzoate plasticizers from a technical perspective, depending on the end-application. In addition, di-benzoate plasticizers and phthalate plasticizers are subject to different constraints under the Community legislation, where phthalates are banned from a number of applications. This results in a number of customers making a clear distinction between di-benzoate plasticizers and phthalate plasticizers.
161. Producers of adhesives, caulks and sealants account for approximately three-quarter of the EEA market for di-benzoate plasticizers. Those producers of adhesives, caulks and sealants who have abandoned phthalate plasticizers to the benefit of di-benzoate plasticizers are unlikely to switch back to phthalate plasticizers. In addition, there are no readily available non-phthalate plasticizers which could easily replace di-benzoate plasticizers on a large scale and certain basis. It should therefore be concluded that for customers producing adhesives, caulks and sealants, di-benzoate plasticizers can be hardly substituted by other plasticizers.
162. Producers of PVC flooring account for approximately one-quarter of the EEA market for di-benzoate plasticizers. Those producers of PVC flooring switch from phthalate plasticizers and di-benzoate plasticizers depending on a variety of factors, including pricing or availability. Di-benzoate plasticizers are technically substitutable by BBP and DBP in particular, and producers of PVC flooring are not sensitive to the CMR classification applying to phthalate plasticizers. It should therefore be concluded that for customers producing PVC flooring, di-benzoate plasticizers can be substituted by other plasticizers.
163. As producers of adhesives, caulks and sealants account for the very large majority of customers, it should be concluded that di-benzoate plasticizers constitute a separate

⁷⁹ Response to Article 11 request for Velsicol internal documents – Question 2 – volume 1 – folder 11.

market. Nevertheless, phthalate plasticizers exert a certain level of constraint on this market, in particular with regard to those customers producing PVC flooring.

4.3.2. *Geographic market*

164. The geographic market for di-benzoate plasticizers is subject to the same constraints, such as transport costs and customs tariffs, as the markets for benzoic acid. Transportation costs would account for approximately 8% to 10% of the cost of di-benzoate plasticizers shipped between the United States and Europe⁸⁰. Di-benzoate plasticizers entering the EEA are, like benzoic acid and sodium benzoate, subject to a 6.5% tariff.
165. In addition, Emerald is the only non-EEA competitor of Velsicol with a substantial worldwide market share, and susceptible to export quantities of di-benzoate plasticizers into the EEA territory⁸¹. There are no exports from China to the EEA. With the exception of Emerald, whose market share in the EEA is [5-10]%, other competitors active in the EEA are all based in the EEA.
166. Ultimately, trade in di-benzoate plasticizers between the United States and the EEA is very limited. Emerald exports to the EEA have remained relatively limited since 2000, and never allowed Emerald to increase its market share significantly. [...] Emerald is already competing against Velsicol in the United States, where both companies produce di-benzoate plasticizers locally, and is unlikely to develop its sales in the EEA, where it would also compete against Velsicol but with a competitive handicap due to transportation costs and tariffs.
167. As referred to in Recital 45, the evolution of the exchange rate between the euro and the US dollar between 2000 and 2008⁸² did not favour imports of US products into the EEA. In addition, the euro depreciated against the US dollar after July 2008⁸³, rendering US exports to the EEA more costly⁸⁴. Ultimately, the conditions for Emerald to exert a significant competitive pressure in the EEA are unlikely to be met.

80 The notifying party submitted that the transportation cost between the United States and the EEA is EUR [...]*, for an average price for benzoate plasticizers of EUR [...]*. However, this submission is based on transport between the US east coast and Europe, whereas Emerald is located on the US west coast. Transportation costs for Emerald are therefore significantly higher than those submitted by the parties, due to longer travel time plus canal of Panama's taxes.

81 Benzoate plasticizers Velsicol's worldwide market share is [60-70]*% in 2007, versus [10-20]*% for Emerald. Source: Form CO.

82 26 October 2000: 1 EUR=0.83 USD; 15 July 2008: 1 EUR=1.60 USD.

83 19 September 2008: 1 EUR=1.45 USD

84 Nevertheless, the cost of benzoate plasticizers is to a large extent derived from the cost of toluene. Any depreciation of the US dollar in comparison to the euro will result in both a cost advantage for the US producers, but also in an increase in their costs to purchase toluene. The advantage, or handicap, derived from the EUR/USD exchange rate would therefore only apply to other costs, such as transportation, energy, labour force. Therefore, although the EUR/USD exchange rate impacts trade flows, its impact in the present case might be mitigated to some extent.

168. The notifying party submitted in response to the Statement of Objections⁸⁵ that several EEA customers switched from Velsicol to Emerald in 2007 and 2008, therefore wishing to highlight the competitive constraint exerted by Emerald in the EEA market for di-benzoate plasticizers. However, several of the examples have not been confirmed, signifying that Emerald did not capture all the customers the notifying party claims. In addition, according to the notifying party's submission, volumes lost to Emerald in 2007 and 2008 would account for a minimal proportion of sales of Velsicol in the EEA (less than [0-5]*% for the two cumulated years, or less than [0-5]*% annually).
169. Wuhan produces benzoate plasticizer in a joint venture with Velsicol. This joint venture does not export to the EEA and is controlled at [>50]*% by Velsicol. It is, therefore, unlikely that the joint venture would sell in the EEA to compete against Velsicol.
170. It should therefore be concluded that the market for di-benzoate plasticizers is EEA wide in scope, and that the competitive constraint exerted by Emerald is very limited.

5. MARKET CONDITIONS

5.1. BENZOIC ACID

5.1.1. Competitors – market shares

171. DSP and Velsicol are the only EEA-based suppliers of solid benzoic acid. There are other competitors exporting small volumes of benzoic acid into the EEA, such as Wuhan and Emerald. The notifying party submitted that in 2007 Emerald exported only [0-500]* tonnes of benzoic acid to the EEA, whereas Wuhan and other Chinese producers exported almost [2000-3000]* tonnes to the EEA. Conversely, DSP and Velsicol respectively sold [7 000-9 000] and 7 000 tonnes of benzoic acid in the EEA, and other producers accounted for 100 tonnes. According to the notifying party, such sales would lead to a market share of [85-91]% for Velsicol/DSP, [10-15]% for Wuhan and other Chinese producers, [0-5]% for Emerald, and [0-5]% for others.
172. To calculate the exports of benzoic acid from China to the EEA, the notifying party considered the total exports of benzoic acid, its salts (sodium benzoate) and esters (benzoate plasticizers), which is a figure aggregated by Eurostat. It can, therefore, be considered that this data is particularly reliable as each quantity of benzoic acid, its salts and esters that enters the EEA from China is measured for the application of custom tariffs. The notifying party then indicated that they estimated that 25% of these exports corresponded to benzoic acid, whereas 75% corresponded to sodium benzoate. In 2007, according to Eurostat, the exports of benzoic acid, its salts and esters from China to the EEA amounted to 7 404 tonnes.
173. However, the notifying party's estimate of the exports of benzoic acid from China to the EEA was not confirmed by the Commission's market investigation. In particular,

⁸⁵ Reply to the Statement of Objection – 21 October 2008 – paragraph 203.

there was no finding of any EEA customer who purchases or had purchased benzoic acid from Wuhan or any other Chinese producers.

174. Wuhan indicated that in 2007 it exported [...] tonnes of benzoic acid (which would be consistent with the finding in the Commission's market investigation that essentially no EEA customer buys benzoic acid from China) and [...] tonnes of sodium benzoate to the EEA. If the split proposed by the parties (25/75) is correct, this would mean that Wuhan would account for [5-10]% of all Chinese exports of benzoic acid to the EEA, whereas it would account for [60-70]% of all Chinese exports of sodium benzoate to the EEA. This does not, however, properly reflect the relative importance of Wuhan and other Chinese producers, considering that Wuhan is by far the largest Chinese producer and is also the most active Chinese producer on the international markets.
175. Wuhan data rather indicate that the split which should be applied to the Chinese exports of benzoic acid, its salts and esters should be [0-5]% for benzoic acid and [90-100]% for sodium benzoate⁸⁶. This is because the results of the Commission's market investigation show that (i) essentially no distributor or direct customer contacted by the Commission currently purchases benzoic acid from Chinese producers (see Section IV.A.2), and (ii) there are no exports of benzoate plasticizers from China to the EEA. The Commission has therefore allocated [0-5]% of the Chinese exports of benzoic acid, its salts and esters to benzoic acid and the rest ([90-100]%) to sodium benzoate. It is, however, likely that even that split overestimates the presence of the Chinese producers in the EEA given that as mentioned in the previous Recitals the Commission has not come across any customers in the EEA that would purchase from the Chinese producers.
176. On that basis, Chinese exports of benzoic acid to the EEA are much more limited than submitted by the parties, and would have accounted in 2007 for [0-500] tonnes (of which Wuhan accounts for [...] tonnes). The data provided by the notifying party in relation of exports of benzoic acid from Emerald to the EEA was not materially different than the data provided by Emerald. This would result in a market share for Velsicol/DSP of [90-100]%, [2-4]% for Emerald, [0-3]% for Wuhan and [1-4]% for the other Chinese producers.
177. The new market share figures calculated by the Commission on the basis of results of its market investigation have not been contested by the parties in their response to the Statement of Objections.

⁸⁶ When considering Wuhan's exports of benzoic acid and sodium benzoate to the EEA together, benzoic acid accounts for [...]%, whereas sodium benzoate accounts for [...]%.

Benzoic acid (BA) - EEA-wide market shares in 2007 (merchant market)

	DSP	Velsicol	DSP + Velsicol	Emerald (US)	Wuhan (China)	Other Chinese producers ⁸⁷
Solid BA	[45-55]%	[40-50]%	[90-100]%	[2-4]%	[0-3]%	[1-4]%

Source: Form CO and Commission analysis

178. The following table also illustrates the parties' and their competitors' market shares on a worldwide basis.

Benzoic acid (BA) - World-wide market shares in 2007 (merchant market)

	DSP	Velsicol	DSP + Velsicol	Emerald (US)	Wuhan (China)	Others (including Chinese producers)
Solid BA ⁸⁸	[15-21]%	[5-15]%	[25-31]%	[30-40]%	[10-20]%	[17-25]%

Source: Form CO

5.1.2. Production capacities

179. The 2007 production for merchant sales of solid benzoic acid was [36 000-43 000] tonnes in the EEA⁸⁹. The notifying party claims that the EEA production for merchant sales has fallen by 15% in the period from 2005 to 2007 and submits that the US and Chinese merchant productions have increased by 63% and 11% respectively during that period. However, the increase in the production for merchant sales in the US is most likely driven by the closure of Velsicol's Chattanooga plant and the subsequent agreement between Emerald Kalama and Velsicol for the supply of benzoic acid to Velsicol.

Global merchant production of solid benzoic acid by regions (1000 tons)

Regions	2005	2006	2007
EEA	46.6	43.8	39.8
United States	29.4	29.9	47.9
China	45.6	47.9	50.8

Source: Notifying party

180. The notifying party also submitted that there are important spare capacities in the United States and China for benzoic acid. However, the Commission's market investigation does not entirely confirm the notifying party's submission. Indeed, while

87 The other Chinese producers are LiShui GuanShan, Jiahua Chemical, Tianjin DOngda, Tengzhou, Benxi Black Horse and Guangzhou.

88 Page 89 of Form CO.

89 Form CO.

the market investigation reveals that there are some large spare capacities for liquid benzoic acid, only Wuhan appears to have important spare capacities in the downstream market for solid benzoic acid.

181. In terms of the overall supply-demand balance in the market, most of the customers that replied to the Commission's market investigation consider the market for benzoic acid to be rather well-balanced, and some of them even reported that they have already met some difficulties in obtaining the requested quantity for solid benzoic acid⁹⁰. Moreover, several internal documents emanating from the notifying party highlighted that the global market for benzoic acid was very 'tight' in 2007 and that during the beginning of 2008 suppliers had difficulties in satisfying their customers' demand as regards solid benzoic acid. This means, in particular, that (i) competitors with spare capacity in solid benzoic acid decided not to use this excess capacity to sell more in the merchant market, therefore highlighting the limited responsiveness of competitors to respond to a decrease in supplies, and (ii) the spare capacities for liquid benzoic acid cannot be transported overseas, and thus the existence of spare capacities for liquid benzoic acid does not impact the EEA market. The implications of these findings are further discussed in Section VI.A.

5.1.3. Customers

182. Customers of benzoic acid are either distributors or end-users. In 2007, by value Velsicol sold [70-80]*% of its solid benzoic acid in the EEA via distributors ([20-30]*% directly) and DSP sold [35-45]% via distributors ([55-65]% directly). The parties' Chinese and US competitors sell mainly or exclusively via distributors.
183. The notifying party submits that customers are sophisticated purchasers with significant buyer power. However, the Commission's market investigation did not confirm that submission. Most of the customers that replied to the market investigation indicated that they have little, or no, bargaining power vis-à-vis their supplier of benzoic acid⁹¹.

5.2.SODIUM BENZOATE

5.2.1. Competitors - market shares

184. DSP and Velsicol are the only EEA-based suppliers of sodium benzoate in the EEA. Their main competitors, Wuhan in China and Emerald in the United States, export sodium benzoate to the EEA in different amounts. In 2007, Emerald exported,

⁹⁰ Response to Article 11 Request to end users of benzoic acid and sodium benzoate 22 August2008-Question 25; Response to Article 11 Request to distributors of benzoic acid, sodium benzoate and benzoate plasticisers 22 August2008-Question 28.

⁹¹ Response to Article 11 Request to end users of benzoic acid and sodium benzoate 22 August2008-Question 57; Response to Article 11 Request to distributors of benzoic acid, sodium benzoate and benzoate plasticisers 22 August2008-Question 58

[<1000]* tonnes of sodium benzoate to the EEA⁹² whereas, according to the notifying party, Wuhan and other Chinese producers exported 5 600 tonnes to the EEA. DSP and Velsicol sold [8 000-9 000] and [5,000-10,000]* tonnes of sodium benzoate respectively in the EEA, and other producers accounted for 200 tonnes. According to the notifying party those sales would lead to a market share of [65-75]% for Velsicol/DSP, [25-35]% for Wuhan and other Chinese producers, [0-5]% for Emerald and [0-5]% for others.⁹³

185. The volumes sold in the EEA by Chinese producers are calculated by the notifying party under the bona fide hypothesis that 75% of the exports of benzoic acid, its salts (sodium benzoate) and esters (benzoate plasticizers) from China to the EEA correspond to sodium benzoate. However, the Commission's market investigation indicated that 95% of Chinese exports of benzoic acid, its salts and esters to the EEA should correspond to sodium benzoate. [...] These findings are coherent with the results of the Commission's market investigation and were not contested by the parties in response to the Statement of Objections.
186. In accordance with that extrapolation, Chinese exports of sodium benzoate to the EEA would have amounted in 2007 to approximately 7 000 tonnes. Taking into account the actual amount of sodium benzoate sold in the EEA by Emerald and Wuhan, the market shares of the parties and their competitors in 2007 on the EEA market for sodium benzoate would be as follows:

Sodium benzoate - EEA-wide market shares in 2007

	DSP	Velsicol	DSP + Velsicol	Emerald (US)	Wuhan (China)	Other Chinese producers ⁹⁴
Sodium benzoate	[35-45]%	[20-30]%	[60-70]%	[0-3]%	[15-25]%	[10-20]%

Source: Notifying party and Commission's market investigation

187. The following table also sets out the parties' and their competitors' market shares on a worldwide basis.

⁹² Emerald's response to questionnaire in Phase II of 22 August 2008 (question 18).

⁹³ Form CO, Table 7.2.36(b)

⁹⁴ The other Chinese producers are LiShui GuanShan, Jiahua Chemical and Tianjin Dongda.

Sodium benzoate - World-wide market shares in 2007

	DSP	Velsicol	DSP + Velsicol	Emerald (US)	Wuhan (China)	Others (including other Chinese producers)
Sodium benzoate	[15-25]%	[10-15]%	[30-40]%	[15-25]%	[15-25]%	[20-30]%

Source: Notifying party

5.2.2. Production capacities

188. In 2007, production of sodium benzoate in the EEA amounted to [30 000-38 000] tonnes, which accounted for [30-40]% of world production. From 2005 to 2007, production of sodium benzoate in the EEA remained fairly stable increasing in 2007. Total sales of sodium benzoate in the EEA in 2007 amounted approximately to 21 000 tonnes and EUR 24 million.
189. The notifying party submitted that there is significant excess capacity on the market for sodium benzoate. The Commission's market investigation confirmed that there is excess capacity in both China and the United States. However, the Commission's market investigation also showed that several respondents considered that the market for sodium benzoate is stable or characterised by a shortage⁹⁵, and that this is consistent with an internal document of Arsenal where it noted that, while "*global demand for salts remains strong, global supply is tight.*"⁹⁶

5.2.3. Customers

190. Customers of sodium benzoate on the EEA market are either distributors or end-users. In 2007, Velsicol made [50-60]*% of its EEA sales of sodium benzoate in volume directly to end-users and [40-50]*% via distributors. DSP sold [40-50]% of its EEA sales in volume directly to end-users and [50-60]% via distributors. The parties' Chinese and US competitors sell mainly or exclusively via distributors.
191. The notifying party submitted that the parties' customers are sophisticated purchasers with significant buyer power. However, the Commission's market investigation did not confirm that submission as almost all customers that replied to it indicated that they have no, or only little, bargaining power vis-à-vis their supplier of sodium benzoate.⁹⁷

⁹⁵ Responses of customers to question 60 of questionnaire in Phase II of 22 August 2008.

⁹⁶ Executive Committee Review of 21 July 2008.

⁹⁷ Responses of customers to question 58 of questionnaire in Phase II of 22 August 2008.

5.3.BENZOATE PLASTICISERS

192. Velsicol is active in the di-benzoate plasticizer market, whereas DSP is not. Velsicol and DSP activities therefore do not overlap in this market. The notifying party argues that Velsicol has a [0-5]% market share in the market for plasticizers, taking into account plasticizers of all types. However, considering the (narrower) market for di-benzoate plasticizers, Velsicol has an EEA market share of [70-80]%.
193. The notifying party submitted that Velsicol is hardly active in the mono-benzoate plasticizer area, that it does not produce such plasticizers in the EEA, and that it did not sell that product in the EEA in 2007 and 2008. Velsicol also confirmed that it has no plans to start production of mono-benzoate plasticizers in the EEA. As indicated in Recital 133, the Commission has confirmed that mono-benzoate and di-benzoate plasticizers are not substitutable. Consequently, the Commission adapted its assessment of the competitive concerns to focus on the market for di-benzoate plasticizers, whereas in the Statement of Objections, it assessed the impact of the proposed transaction in a larger market including mono-benzoate and di-benzoate plasticizers.

5.3.1. Competitors

194. Velsicol is by far the largest producer of di-benzoate plasticizers worldwide, with a [60-70]*% sales share. Velsicol produces di-benzoate plasticizers in the EEA (Estonia), in the United States and in China where it set up a joint venture with Wuhan⁹⁸. In addition, Wuhan is committed not to compete with the joint venture in producing benzoate plasticizers as long as the joint venture exists, and for two years after it is terminated. Emerald is the second largest producer with a worldwide market share of [10-20]*%. Its factory is based in the United States and it is a vertically integrated producer as it produces internally benzoic acid for its process.
195. EEA competitors in the market for di-benzoate plasticizers are principally Ferro Corporation ("Ferro"), the United States, and Caffaro Srl ("Caffaro"), Italy. Both of them sell the bulk of their production in the EEA territory. These two competitors are, however, quite different. Caffaro used to be a producer of benzoic acid, and thus started the production of di-benzoate plasticizers in 2002 to use the raw material it produced (since then Caffaro has stopped production of benzoic acid). On the other hand, Ferro is a large producer of phthalate plasticizers, principally BBP, and started to produce di-benzoate plasticizers in 2005 to leverage its commercial position and to supply its customers willing to make phthalate-free products with a substitute plasticizer.
196. Sales of Ferro have increased very fast since 2005 (multiplied by [...] between 2005 and 2008 according to the sales of benzoic acid of the notifying party to Ferro), whereas sales of Caffaro have only slightly increased since 2002. The successful entry of Ferro in the EEA market for di-benzoate principally relies on its plasticizer expertise. As already referred to in Recital 195, Ferro is a large producer of BBP, which is the phthalate plasticizer with the closest technical properties as di-benzoate plasticizers. Ferro thus has a strong technical and commercial expertise, which it can

⁹⁸ Velsicol controls [>50]*% of the joint venture, versus [<50]*% for Wuhan.

leverage to accelerate its entry in the market for di-benzoate plasticizers. It also has an established network of customers. Therefore, Ferro has all the necessary assets and expertise to continue to expand its sales of di-benzoate plasticizers in the EEA, and ultimately become the most serious competitor of Velsicol in this area.

Di-benzoate Plasticizers EEA-wide market shares - 2007				
Velsicol	Ferro	Emerald	Caffaro	Others
[70-80]%	[5-10]%	[5-10]%	[0-5]%	[0-5]%

Source: Commission market investigation

197. In 2007, sales of di-benzoate plasticizers in the EEA amounted to approximately 17 000 tonnes, representing a merchant value of EUR 25 million. Altogether EEA-based producers supply more than 90% of the EEA market, and Emerald is the only significant non-EEA supplier, with an EEA market share of [5-10]%.
198. Oxeno, a subsidiary of Evonik Industries AG ("Evonik"), Germany, is an international company producing mono-benzoate plasticizer from its plant in Germany. It is not active in the production of di-benzoate plasticizers. Similarly, Exxon Mobil Corporation ("Exxon Mobil"), the United States, started its production of mono-benzoate plasticizers in 2007 and does not produce di-benzoate plasticizers. These two companies are thus not considered as direct competitors of Velsicol⁹⁹.
199. All EEA-based producers of benzoate plasticizers, including both mono-benzoate and di-benzoate plasticizers, source their raw material, benzoic acid, from DSP.

5.3.2. Customers

200. Di-benzoate plasticizers are used for a relatively limited number of applications. The notifying party submitted that EEA customers use di-benzoate plasticizers for the following applications:

Percentage of Velsicol's total EEA di-benzoate plasticiser sales	
Adhesives	30%
Caulks	< 5%
Sealants	34%
PVC flooring	23%
Other	~ 10%

Source: Notifying party

201. Those applications reflect the particularly good compatibility of di-benzoate plasticizers with PVAc¹⁰⁰, which is a major component of adhesives, caulks and

99 For the sake of completeness, in an hypothetical market including mono-benzoate and di-benzoate plasticizers, the market shares in 2007 would be distributed as follow: Arsenal [60-70]%; Evonik [20-30]%; Emerald [5-10]%; Ferro [5-10]%; Caffaro [0-5]%; Others [0-5]%.

100 Polyvinyl acetate

sealants. In the United States, for instance, approximately 95% of di-benzoate plasticizers are used to produce these three products¹⁰¹.

202. The market shares described in Section *V.C.1 Competitors* correspond to sales of di-benzoate plasticizers to any kind of customers, including in particular companies producing adhesives, caulks, sealants or PVC flooring. The Commission's market investigation did not find any information showing that Velsicol's competitors should have a significantly different distribution of their sales in function of the final users.
203. In 2007, [80-90]*% of Velsicol sales of di-benzoate plasticizers in the EEA were done directly, whereas [10-20]*% were via distributors.

5.3.3. *Entry*

204. The notifying party has submitted that the barriers to entry are low. The notifying party argues that building production capacity requires a low investment (EUR 5 million for a viable unit production), little technological know-how is needed and a current producer of other kind of plasticizers could switch to di-benzoate plasticizers without having to make a large investment¹⁰². The notifying party also emphasises that a major oil company, ExxonMobil, has recently entered the market for mono-benzoate plasticizers¹⁰³, starting production capacity in 2007. [...]*
205. Nevertheless, irrespective of the costs incurred to build a di-benzoate plasticizer factory, a new producer would face the constraint of accessing liquid benzoic acid, where the party will be the single producer in the EEA.

6. COMPATIBILITY WITH THE COMMON MARKET & EEA AGREEMENT

6.1. BENZOIC ACID – UNILATERAL EFFECTS

206. Following the Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings¹⁰⁴, ('the Horizontal Merger Guidelines'), the Commission has identified several factors indicating that the proposed transaction could lead to a significant impediment of effective competition with regard to unilateral effects in the EEA market for solid benzoic acid.

101 Form CO, Annex 14 C, SRI Report page 62

102 Form CO 6.3.36, p. 51. According to the notifying party, switching would also be quick for a producer of phthalates.

103 Production processes are similar for mono-benzoate and di-benzoate plasticizers according to the notifying party.

104 OJ C 31, 5.2.2004, p. 5

6.1.1. High combined market share

207. According to established case law, although the importance of market shares may vary from one market to another, very large shares are in themselves, and save in exceptional circumstances, evidence of the existence of a dominant position.¹⁰⁵
208. Based on the results of the Commission's market investigation, the market share of the combined entity in the EEA market for solid benzoic acid would be as high as [90-100]%, whereas the other producers would only have a marginal presence.
209. Post transaction, the Herfindahl-Hirschman-Index (HHI)¹⁰⁶ for the market of solid benzoic acid and the merchant market for liquid benzoic acid will be between [8 000-9 000] with a substantial increment of [4 200-4 800]. Measured by HHI, the already high concentration levels increase by [4 200-4 800], far above the safe harbours provided by the the Horizontal Merger Guidelines.¹⁰⁷ The large increase of [4 200-4 800] points, or close to 100% of the pre-merger concentration level, is particularly striking.
210. Post transaction, the combined entity would enjoy a near-monopoly position within the EEA as Velsicol and DSP are currently the sole producers of technical grade benzoic acid in the EEA and face very limited competition from non-local producers. The only other suppliers of benzoic acid in the EEA are Emerald, the United States, and Wuhan, China, and a number of small Chinese manufacturers that are hardly present in the EEA market. In addition, DSP is currently of the view that it already has, on its own, a dominant position in Europe (see Recital 57).
211. The notifying party argued that: "*There are no contracts that provide for take-or-pay obligations for the customer or otherwise require the customer to off take a certain minimum volume... Contracts do not provide for volume rebates of any kind, not even in the case of contracts for liquid BA, where DSP according to the Commission's approach is deemed to enjoy a monopoly position. All of these elements point to a total absence of market power on the part of the suppliers.*"¹⁰⁸ That argument cannot be accepted as the absence of market power does not hinge on the (lack of) presence of a specific contractual agreement but rather on careful empirical assessment.
212. In support for its argument that market power is not correlated with market shares, the notifying party noted that although DSP: "*had a market share in solid technical grade BA of [70-80]*% in Japan in 2006, double its estimated European share of [30-40]*%, ... DSP's prices in Japan have been in line with EEA prices and have closely tracked EEA prices... This is wholly inconsistent with high market shares in one*

¹⁰⁵ See Case T-210/01 – General Electric Company v. Commission of the European Communities, ECR [2005] II-05575, paragraph 115.

¹⁰⁶ See paragraph 16 of the Horizontal Merger Guidelines.

¹⁰⁷ See at paragraphs 19 and 20 of the Horizontal Merger Guidelines.

¹⁰⁸ Section 3.8 of Keynote Memo Benzoic Acid, 29 September 2008.

region conferring market power".¹⁰⁹ That argument also can not be accepted as margins, rather than prices, are the relevant variable to examine when looking at the degree of market power in a given market. Moreover, when the Commission compared DSP's EEA margins with Asian and North American margins (which seems to be the relevant comparison given that markets are defined as regions rather than countries), it found, for example, that during the first seven months of 2008 the EEA margins were higher by [...] and [...] than in Asia and North America, respectively, while in 2007 the EEA margins were higher by [...] and [...] in Asia and North America, respectively. This simple analysis is thus consistent with DSP being subject to different market conditions in the EEA than in the rest of the world. However, this type of general analysis requires careful empirical assessment of other characteristics of the market, such as its size or the customer composition; in alleging that the high market shares are not revealing market power, the notifying party has, however, not taken into account these elements.

6.1.2. Close competitors

213. In addition to the parties' very high combine market share, the Commission's market investigation indicates that Velsicol and DSP are the closest competitors in the market for benzoic acid in the EEA.
214. Customers claim that Chinese benzoic acid is of lower quality than that of the parties, and most of the customers are not willing to switch to Chinese suppliers. This is also confirmed by Velsicol's Executive Committee Report of January 2008 that notes that: "*Chinese capacity is divided in terms of quality, limits outlet in US and EU*".¹¹⁰ Although no such concerns have been raised as regards the quality of benzoic acid supplied by Emerald, in view of the very limited presence of Emerald in the EEA, customers in the EEA do not appear to consider Emerald as a credible alternative supplier¹¹¹.
215. There are also several internal documents of Arsenal/Velsicol that note the competitive constraint that DSP exerts on Velsicol, in the EEA but also outside the EEA, including: (i) "*DSM continues to execute global gain share strategy in both benzoic acid and salts, Europe impact seems to be mainly in acid, US & Asia in both product areas fairly equally*"¹¹², (ii) "*DSM more aggressive on benzoic acid in EU, driving prices back to below pre-increase levels*"¹¹³, (iii) "*DSM continues to snipe even with higher toluene prices*"¹¹⁴, (iv) "*DSM and Kalama aggressively pursuing BA in So.*

¹⁰⁹ Section 3.10 of Keynote Memo Benzoic Acid, 29 September 2008.

¹¹⁰ Executive Committee Report, 23 January 2008.

¹¹¹ Response to Article 11 request to end users- benzoic acid and sodium benzoate- 22 August 2008- Question 21-24

¹¹² Annual Review – Chemical Specialties, 18 May 2006.

¹¹³ Arsenal Review and Executive Committee Report, 20 December 2007.

¹¹⁴ Executive Committee Meeting Business/Sales Update, February 2006.

*America at reduced prices, DSM also aggressive in EU with prices*¹¹⁵, or (v) *"consolidation of DSP and Velsicol will consolidate competition in the industry, unlikely to face new entrant."*¹¹⁶

216. In response to the Statement of Objections, the notifying party submitted that the EEA customers that source from both Velsicol and DSP represent only [10-20]*% of their overall customers (representing [20-30]*% of the volume) and argued that this implies that Velsicol and DSP do not exert competitive pressure on each other. However, as neither Wuhan nor Emerald are currently present in the EEA, it seems that the likely explanation for that finding is that the customers of benzoic acid do not multi-source and instead single-source. In such a case, it cannot be concluded that Velsicol and DSP do not exert competitive pressure on each other. This would also be consistent with the results of the Commission's market investigation that showed that while some customers have switched from Velsicol to DSP or vice versa in the EEA, no such switches have been reported by the results of the Commission's market investigation with Chinese or US based suppliers.¹¹⁷ The preference for the European product is also made clear in DSP's internal documents that attribute DSP's growth in its EEA market share in the past to the exit of Caffaro, another EEA-based producer.¹¹⁸
217. With regard to Caffaro's exit, DSP's internal documents suggest that: *"the exit of Caffaro has reduced the competitive intensity in Europe"* and that: *"compared to 2003 growth is coming more and more from new market development ... and less from market rationalization (2003 Caffaro deal)."*¹¹⁹ DSP's assessment of the results of the loss of a competitor in the EEA market thus provide further evidence for the likely future development post-transaction. In the Commission's view, it is more relevant than what has happened in the United States following the closure of Velsicol's plant that according to the notifying party did not result in any price increases.
218. The notifying party also noted in its response to the Statement of Objections that the Commission failed to take into account the expected market development in a counterfactual situation: in the absence of the proposed transaction, Velsicol would significantly reduce its solid benzoic acid sales in the merchant market, as it would use benzoic acid captively to produce benzoate plasticisers that have a higher margin than benzoic acid. In particular, based on the notifying party's submissions, Velsicol would reduce its production of benzoic acid from [10,000-15,000]* tonnes to [3,000-10,000]* tonnes between the period from 2007 to 2010, and its estimated market share

115 Executive Committee Report, 12 May 2008.

116 Investment thesis for DSP.

117 Response to Article 11 Request to end users- benzoic acid and sodium benzoate- 22 August 2008- Question 21-24

118 Slide 8 "Regional market shares free market" of DSP's "Update Businessplan Benzoic Acid", August 2006.

119 ASR 2004-2009 DSP Special products.

in the EEA would drop from [40-50]*% in 2007 to [20-30]*% in 2008, [20-30]*% in 2009 and [10-20]*% in 2010. Even if that claim were accepted, it should be noted that Velsicol would still remain the second largest competitor in the EEA (as the customers would most likely switch to DSP, another EEA producers), and would still exert the largest constraint of all the benzoic acid producers on DSP.

219. Moreover, considering that Velsicol's margins are the highest in the EEA compared to other regions of the world, it is reasonable to expect that Velsicol will maintain its current sales of benzoic acid in the EEA market, that is to say, [5,000-10,000]* tonnes, and cease exporting benzoic acid outside of the EEA, where it incurs transport costs, and its sales are subject to tariffs, and as a result its margins are significantly lower. Thus, it is very likely that Velsicol will be able to maintain its current position in the EEA market for solid benzoic acid and continue to impose a significant competitive constraint on DSP post transaction within the EEA. On the basis of those considerations, the notifying party's argument that, in the absence of the proposed transaction, Velsicol would not be able to exercise a significant competitive constraint on DSP, as it would use benzoic acid captively rather than sold it in the merchant market for benzoic acid, should be rejected.
220. Accordingly, it should be concluded that the proposed transaction will remove from the market the closest competitor of Velsicol and significantly increase the market concentration. It thus remains to be assessed whether there exist exceptional circumstances or other factors in the present case, indicating that market shares are not correlated with market power. This could be the case, for example, in markets where customers can easily switch to other suppliers, there are no barriers-to-entry, established competitors have large spare capacities, customers have countervailing buyer power, and potential competitors could easily start production and enter the markets.

6.1.3. Limited possibilities of switching suppliers

221. The Commission's market investigation shows that customers of Velsicol and DSP have limited switching possibilities to alternative suppliers. Firstly, Velsicol and DSP are the only EEA-based suppliers of benzoic acid, and their US or Chinese competitor's presence is very limited in the EEA. Considering the high transport costs and tariffs for imports of benzoic acid into the EEA, if customers were to decide to switch to Chinese or US suppliers, they would have to pay a higher price. Secondly, irrespective of the price, Velsicol and DSP customers claim that they would be reluctant to switch to manufacturers from China due to concerns of lower quality products and less reliable supplies¹²⁰. Thirdly, customers report that switching to an Asian supplier involves several months as the new products have to be tested and internally certified¹²¹. Some of the parties' largest customers noted that switching to

120 Response to Article 11 Request to end users-benzoic acid and sodium benzoate- 22 August 2008-Question 21-24

121 Response to Article 11 Request to end users- benzoic acid and sodium benzoate- 22 August 2008-Question 20; Response to Article 11 Request to distributors- benzoic acid, sodium benzoate and benzoate plasticisers- 22 August 2008-Question 22.

Chinese or US suppliers could even take up to one year or one to two years¹²². It is also consistent with the results of the Commission's market investigation which indicates that most customers would only consider switching to non-EEA based suppliers if prices in the EEA were increased by at least 15%¹²³.

6.1.4. Significant barriers to entry

222. With regard to the barriers to entry, the Section IV.A.2. on the relevant geographic markets showed that there are important barriers to entry, such as tariffs, transport costs and quality considerations that limit Chinese or US competitors' entry or expansion in the EEA. Thus, the competitive constraints exercised by the remaining competitors post transaction are very limited, and it is unlikely that the competitors of the merged entity could thwart any price increases in the EEA.
223. The parties are protected in the EEA by tariffs and transport costs which provide them with a significant competitive advantage over their US and Chinese competitors. Accordingly, the parties' competitors, Wuhan and Emerald, would only be able to exercise competitive pressures on the parties in the EEA if they had a significant competitive advantage in terms of costs allowing them to compensate for their handicap due to transport costs and tariffs. However, several internal documents of Velsicol, as well as the parties' and their competitors' respective worldwide sales, indicate that Wuhan and Emerald do not have a significant cost advantage over the parties.
224. An internal document of Velsicol¹²⁴ relating to quotes made by Emerald, DSP, Velsicol and Wuhan to supply solid benzoic acid to Velsicol's plant in the United States shows that Wuhan's prices are higher than those of DSP and Velsicol. Considering that large volumes were at stake, it is reasonable to assume that the four producers made a competitive offer, therefore reflecting their costs and the margins that they consider reasonable. In addition, Wuhan applied the same price formula to Velsicol with regard to the United States as it applies in China for their common joint venture. Given that the EEA producers and Wuhan are subject to similar constraints in the United States such as tariffs and transport costs, the price difference between Wuhan and the EEA producers indicates that Wuhan does not have any particular advantage in terms of cost structure when compared to EEA producers.

122 Response to Article 11 Request to end users- benzoic acid and sodium benzoate- 22 August 2008- Question 20

123 Response to Article 11 Request to end users of benzoic acid and sodium benzoate 22 August 2008- Question 19. Although a great number of customers was unable to evaluate by how much prices in the EEA would have to rise in order for them to decide to switch to a Chinese or US supplier, the majority of the customers who replied indicated that prices of benzoic acid in Europe would have to increase by more than 15% for such a switch to be worth considering.

124 Velsicol's internal documents submitted in response to Article 11 Request for information, Arsenal Documents Question 4, 29 August 2008

225. While another internal document of Velsicol¹²⁵, that estimates the costs of Velsicol, Wuhan and Emerald, indicates that Wuhan's variable costs for flake (solid) benzoic acid is lower than that of Velsicol, this cost advantage is still not sufficient for Wuhan or other Chinese producers to offset the handicap of 10% to 15% that they face vis-à-vis the parties due to the transportation costs and tariffs. In addition, the same internal document of Velsicol compares the cost of Velsicol and Emerald for molten (liquid) benzoic acid and indicates that Emerald's cost structure is less competitive than that of Velsicol¹²⁶.
226. The notifying party also argued in the response to the Statement of Objections that Chinese manufacturers enjoy a significant cost advantages over their EEA competitors, as (i) the price of toluene, main raw material for benzoic acid, is about [0-100][0-100]*/tonne lower in China than in the EEA, (ii) labour costs and plant investments in China are cheaper and (iii) manufacturers benefit from "all sorts of government subsidies".¹²⁷ The parties submitted the report of a visit by DSP staff to [...]*, a producer of benzoic acid and sodium benzoate, China, which mentions that this specific producer benefitted from "support from the local government" to build a new plant and from an annual subsidy for the employment of disabled persons. The parties also stated that a study produced by KPMG (which they did not submit) shows that Chinese manufacturers benefit from energy subsidies.
227. However, those submissions of the notifying party do not seem to be supported by the parties' own internal documents. For example, if the price of toluene were significantly lower for Chinese producers, such as Wuhan, than for EEA based producers, it would be expected that the variable costs of Wuhan for liquid benzoic acid, in which toluene account for the highest percentage, reflect this cost advantage (as toluene accounts for about 91% of liquid benzoic acid costs). However, based on Velsicol's internal document, it appears that Wuhan's variable cost for liquid benzoic acid is approximately [...]*/tonne higher than that of Velsicol¹²⁸ and thus significantly higher than that of DSP¹²⁹. Additionally, the notifying party did not provide any specific evidence concerning either the Chinese legislation on subsidy schemes or employment conditions and did not show the direct effects of these alleged benefits on the Chinese producers in comparison with the cost structure of the EEA producers.
228. Moreover, even if the price of toluene were cheaper in China than in the EEA, it does not necessarily imply that Wuhan or other Chinese producers would enjoy an actual

¹²⁵ Velsicol's internal documents submitted in response to Article 11 Request for information, Arsenal Documents Question 4, 29 August 2008

¹²⁶ Velsicol's internal documents submitted in response to Article 11 Request for information, Arsenal Documents Question 4, 29 August 2008

¹²⁷ No claim has been made by the notifying party that Emerald would have a cost advantage over the parties.

¹²⁸ Based on Velsicol's internal document, Wuhan's variable cost for liquid benzoic acid amounts to USD [...]*/tonne and Velsicol's to USD [...]*/tonne. See Arsenal internal document, Question 4, 29 August 2008

¹²⁹ Based on the notifying party's submission, DSP's cost for toluene would be more than 10% cheaper than that of Velsicol.

cost advantage over Velsicol or DSP. The final cost of toluene paid by a producer depends to a large extent on its geographic proximity to the toluene supplier and on the means of transport the toluene is procured to the benzoic acid production site, such as, pipelines, road, etc. This is also illustrated by the difference between the parties' own costs for toluene¹³⁰.

229. The notifying party's argument that Wuhan offered an extremely favourable price to the joint venture in China also does not establish that Wuhan's price structure is more competitive than that of the parties. This is because Wuhan also has a large share of the downstream joint venture and thus it would have, in any case, clear incentives to offer a very favourable price to the joint venture. Moreover, Wuhan applied the same price formula to Velsicol in China as in the United States. As Velsicol's internal documents revealed, the final price was, however, [10-20]*% higher than that of Velsicol and DSP. Given that all the parties were subject to similar transportation costs and tariffs, this provides further evidence that Wuhan does not seem to have any cost advantages. While the notifying party argued that that specific transaction is not representative of any production cost difference as the transaction was for very large volumes, it is, however, even more demonstrative of the cost structure of the different benzoic acid producers given the large volumes that were at stake.
230. Finally, if the costs of Chinese and US producers were significantly more competitive than those of the parties, and if Chinese producers could easily expand their production capacity as submitted by the notifying party, it would be expected that they would export more to the rest of the world ('ROW' – world excluding the United States, China and the EEA) where all producers face similar transportation costs and tariffs. Based on the notifying party's submission, it appears, however, that Velsicol/DSP's exports of benzoic acid are considerably larger than those of Wuhan. Accordingly, it is unlikely that the cost structure of Wuhan is significantly more competitive than that of the parties.

Exports of benzoic acid to areas other than China, the EEA and the United States (ROW) - 2007

	Velsicol/DSP	Wuhan*	Emerald
Volume (tonnes)	[10,000-20,000]*	[5,000-10,000]*	[0-5,000]*
Exports to ROW in proportion of gross sales of technical grade benzoic acid of each company	[40-50]*%	[10-20]*%	[<5]*%

*Source: Notifying party; * includes Wuhan and other Chinese producers*

231. Also, irrespectively of price considerations, Chinese expansion is limited by quality considerations. As explained previously, customers are reluctant to switch to Chinese manufacturers due to concerns of lower quality products and less reliable supplies.

¹³⁰ Based on the notifying party's submission, the cost of toluene amounted to EUR [...]*/tonne for DSP(Rotterdam) and EUR [...]*/tonne for Velsicol(Estonia) in 2007, being more than 10% higher than for Velsicol than for DSP. This is probably due to the fact that DSP has a direct access to toluene via pipelines.

232. Accordingly, it is very unlikely that the parties' competitors would be able to increase their sales into the EEA if the parties were to increase prices.

6.1.5. Spare capacity

233. As regards the alleged large spare capacities of established competitors, the Commission's market investigation reveals that the merged entity's competitors would have limited ability and incentive to supply more output to the EEA if prices were increased.

(i) Liquid benzoic acid

234. While the Commission's market investigation confirmed that Emerald and Wuhan have large spare capacities for liquid benzoic acid, it also showed that these spare capacities do not allow these competitors to expand their sales into the EEA. Liquid benzoic acid cannot be transported over long distances and therefore has to be converted into solid benzoic acid before entering the EEA market. This would require a capacity expansion and additional investments in terms of facilities for flaking and packaging, and the Commission's market investigation revealed that such investments would be undertaken only in response to a sustainable price increase of a magnitude that would clearly lead to consumer harm. However, while Wuhan acknowledged that it would increase its capacity of liquid benzoic acid in response to price increases of liquid benzoic acid by [...]%, it did not provide an estimate of how much prices would have to increase before it would increase capacity of solid benzoic acid. As only solid benzoic acid can be transported to the EEA, it is thus not clear how the increase in liquid benzoic acid at Wuhan's site could constrain the merged entity in the EEA.
235. Moreover, Velsicol has an agreement with Emerald for the supply of liquid benzoic acid in the United States for five years which also limits the expansion of Emerald's sales in the EEA¹³¹. Under the supply agreement, Emerald is under the obligation to supply Velsicol with a minimum of [...] tonnes of liquid benzoic acid which corresponds to all of Emerald's spare capacity for 2006. The supply agreement also stipulates that if Emerald may have an additional spare capacity of [...] million pounds (equivalent to [...] tonnes) available after 1 April 2007, Velsicol shall exercise its best efforts to purchase this volume¹³².
236. The notifying party submitted in its reply to the Statement of Objections that Emerald has an available spare capacity of [40,000-50,000] tonnes due to its recent exit from the phenol market. Thus, given that Velsicol will only purchase [...] tonnes of liquid

¹³¹ In 2006, Velsicol has entered into a supply agreement with Emerald for liquid benzoic acid following the closure of its benzoic acid plant in Chattanooga, United States. Velsicol purchases liquid benzoic acid to Emerald for the production of benzoate plasticisers. The duration of the contract is [...] years. The supply agreement stipulates that Emerald has to supply all of its current excess liquid benzoic acid capacity, which excess capacity is a minimum of [...] pounds (equivalent to [...] tonnes) per year. Moreover, if additional liquid benzoic acid can be produced by Emerald without capital investment, Velsicol: "shall endeavour to purchase the additional volume of Product up to a maximum annual amount of [...] pounds (equivalent to [...] tonnes). According to the same contract, Emerald may have an additional spare capacity of [...] pounds available after 1 April 2007.

¹³² The notifying party's reply to Article 11 Request for Velsicol Internal documents-Question 4

benzoic acid from Emerald in 2008, Emerald should still have [...] tonnes liquid benzoic acid available, and this amount is sufficient to supply the entire EEA market. However, as liquid benzoic acid cannot be transported over long distances, it would have to be transformed into solid benzoic acid, and Emerald currently does not have any large downstream solid benzoic acid capacities and would only undertake such capacity increase in response to a price increase of significantly more than [10-20]*%, which would clearly lead to consumer harm.

237. While the parties claim that Chinese producers have a cost advantage over the parties, which would overcome their handicap due to the transportation costs and tariffs, no such statement has been made concerning Emerald. On the contrary, one of the Velsicol's internal documents comparing the costs of Velsicol, Wuhan and Emerald indicates that Emerald's cost structure is less competitive than that of Velsicol¹³³. Accordingly, even assuming that Emerald has a large spare capacity for liquid benzoic acid and that it will invest in additional capacity to convert it into solid benzoic acid, considering its significant handicap due to tariffs and transport costs in addition to its less competitive cost structure, it is very unlikely that Emerald would increase significantly its output in the EEA.

(ii) Solid benzoic acid

238. As regards the alleged spare capacity for solid benzoic acid, the Commission's market investigation revealed that Emerald does not have any large spare capacities to expand its sales into the EEA, but on the contrary has difficulty in supplying its current customers. This is also confirmed by Arsenal/Velsicol in its internal documents that note that Emerald has had difficulties in supplying its current customers, including (i) *"Kalama production very tight, having problems supplying customers with benzoic acid"*¹³⁴, (ii) *"Kalama production very tight having problems supplying EU customers after picking up volume at low margin accounts"*¹³⁵, (iii) *"Kalama continues to have sporadic supply problems,"*¹³⁶ or (iv) *"Kalama continues to have occasional supply problems resulting in some "lost sheep" returning to Velsicol"*¹³⁷.
239. While the results of the Commission's market investigation indicate that Wuhan has some large spare capacities in China, it is unlikely that Wuhan would increase its sales of benzoic acid to a significant extent in the EEA. Despite the strong appreciation of the euro against the Chinese Yuan and the strong growth in the demand for benzoic acid within the EEA, Wuhan's exports have [...] significantly low for at least the last five years. In addition, as explained previously, the Commission's market investigation has shown that Wuhan's prices are already currently higher than those of EEA-based competitors, and that the quality of its benzoic acid is considerably lower than that offered by the parties. It is therefore unlikely that clients would switch to

133 Arsenal's internal document, Question 4, 29 August 2008

134 Arsenal Business Review/Executive Committee Report, 27 June 2007.

135 Arsenal Review and Executive Committee Report, 27 June 2007.

136 Arsenal Review and Executive Committee Report, 23 August 2007.

137 Arsenal Review and Executive Committee Report, 29 November 2007.

Chinese competitors to any sufficiently significant extent to prevent the parties from leveraging their market power. The lack of Wuhan's and Emerald's competitive pressure on the EEA producers is best documented on the tight market conditions in the benzoic acid market that were first reported in the Executive Committee Report and Arsenal Review of 24 May 2007, and such reports continued as late as the Executive Committee Report of 12 May 2008. These tight conditions were caused by the shut downs of both Velsicol's and DSP's plants in April 2007 and serve as a very useful test of whether the competitors of Velsicol and DSP can provide more output to the merchant market for benzoic acid in the event that the merged entity would, for example, decide to restrict output to the market. As is clear from the quotations from Velsicol's internal documents, neither Wuhan nor Emerald supplied more output to the benzoic acid merchant market despite the shortage on the EEA market for a period of approximately one year. Emerald did not supply more output because it was capacity constrained due to its supply agreement with Velsicol for liquid benzoic acid. Wuhan also did not supply more output even though it had large spare capacities [...]*. This appears to be quite indicative of the lack of the competitive pressures that Emerald or Wuhan exert on DSP and Velsicol.

240. With regard to the lack of the competitive pressure that the EEA producers are facing, it is also instructive to look at their percentage gross margins in the EEA that are plotted in the following Figure 2 and Figure 3. Despite increasing raw material costs and the alleged competition in the market due to increasing global trade flows, DSP's margins in the EEA were relatively flat during the last six years. Velsicol even managed to increase its margins in the EEA over time, and this is in particular true of the late 2007/early 2008 period during which there was a significant shortage on the EEA market. The development of margins over time thus provides further evidence that neither DSP nor Velsicol appear to be constrained in the EEA market for benzoic acid by other competitors.

Figure 2: DSP's EEA benzoic acid percentage gross margins

[...]*
Source: DSP

Figure 3: Velsicol's EEA benzoic acid percentage gross margins

[...]*
Source: Velsicol

241. The development of DSP's percentage gross margins also dispels the notifying party's argument that DSP barely manages a positive return on investment (ROI) that currently amounts to which indicates that DSP has no market power. A given magnitude of ROI at a particular point in time is, however, not indicative of whether a firm has market power or not, because DSP could have simply made the wrong investment decision to start with, and its ROI could have been low from the moment that it built the plant (and made the wrong decision). Instead it is important to look at the development of ROI (or margins for that matter) over time, and as Figure 2 shows, these have been stable over time. Thus, it is likely that DSP made the wrong investment decision to start with, which does not give any indication of the market power that it enjoys.

242. Accordingly, it is very unlikely that either Emerald or Wuhan could substantially expand their sales of benzoic acid into the EEA if the parties were to increase prices after the proposed transaction has been implemented.

6.1.6. Countervailing buyer power

243. According to the Horizontal Merger Guidelines, countervailing buyer power should be understood as the bargaining strength that the buyer has vis-à-vis the seller in commercial negotiations due to its size, its commercial significance to the seller and its ability to switch to alternative suppliers.
244. The results of the Commission's market investigation indicate that the parties' customers do not have significant buyer power. Most of the parties' distributors and end-users indicate that they have little or no bargaining power when negotiating contracts with the parties¹³⁸. This is not surprising, given that the parties to the proposed transaction have [90-100]% of the EEA market, they are perceived as the closest competitors, and customers have almost no switching possibilities, as neither Wuhan nor Emerald are considered as credible competitors in the EEA.
245. As regards the price transparency of benzoic acid, the notifying party submitted that the overall cost of producing benzoic acid is highly transparent as it is linked to the price of toluene and other utilities such as gas, electricity and water/steam. Thus, customers would have complete visibility as regards the price of benzoic acid and would not accept any unjustified price increase. The results of the Commission's market investigation indicate, however, that despite the alleged price transparency of benzoic acid, final prices charged to customers even within the EEA differ significantly depending on the volume, delivery conditions, contractual obligations and other factors. Based on the notifying party's submission, price differences between individual customers within the EEA are in the range of 10% to 20%. Accordingly, it is difficult to accept that customers in the EEA have a complete visibility of the cost structure of benzoic acid which would allow them to reject any price increase.
246. Moreover, even if they had a complete visibility as regards the price of benzoic acid, customers in the EEA would not have the bargaining power to reject any unjustified price increase given the lack of alternative suppliers of benzoic acid in the EEA. The countervailing buyer power of customers appears to be limited in a market in which the parties to the proposed transaction would have a market share of [90-100]%, they are perceived as the closest competitors, and customers would have only limited switching possibilities post-transaction.
247. In addition, it is not sufficient that buyer power would exist prior to the "merger", it would also have to remain effective post "merger". A concentration involving two suppliers may reduce buyer power if it thereby removes a credible alternative. In the present case, the proposed transaction will remove one of the two main suppliers considered to be the closest competitors in the market, since alternative suppliers,

¹³⁸ Response to Article 11 Request to end users- benzoic acid and sodium benzoate 22 August 2008- Question 57; Response to Article 11 Request distributors- benzoic acid, sodium benzoate and benzoate plasticisers- 22 August 2008

such as Wuhan and Emerald, have only a very limited presence in the EEA and are less competitive due to high transport costs and tariffs. Moreover, benzoic acid coming from China is not regarded by customers as alternative source of supply due to quality considerations.

248. Therefore, it should be concluded that buyer-power post merger will not be sufficient to offset potential adverse effects of the merger.

6.1.7. Entry unlikely to occur

249. As regards potential competition, the notifying party submitted that barriers to entry are not high due to the type of products concerned. It is a mature industry where the raw material (mainly toluene) is widely available. The notifying party submitted that the technology for the production process can also be easily obtained. However, the notifying party's claims regarding the ease of access to the relevant technology are contradicted by some of its own statements. Velsicol has proprietary know-how and technology for the production of benzoic acid in its Estonian plant which it considers essential for its operations. Moreover, in the discussions about possible divestitures, Velsicol submitted that even a buyer of its facilities for the production of liquid benzoic acid "would have to add significant costs to operate the assets efficiently and to continue to invest in process optimisation".
250. The results of the Commission's market investigation also confirmed that there had been no recent entries in the EEA. On the contrary, one producer, Caffaro, has exited the market. The market investigation also highlighted that customers, as well as the parties' competitors, do not expect any new entrants in the market for benzoic acid in the EEA. Similarly, almost all of the customers who replied to the Commission's market investigation indicate that they would not sponsor the entry of a producer of benzoic acid into a new geographic area, for example, the entry of Chinese producers in the EEA¹³⁹. This has been also substantiated by Velsicol's Investment Thesis for DSP by noting that there are significant barriers to entry due to (i) "*Consolidated industry with only two other major competitors located in Asia (Wuhan) and US (Kalama)*", and (ii) "*Logistics costs and customer service requirements*".¹⁴⁰ This has been further confirmed in Velsicol's Investment Thesis Review that notes that "*Consolidation of DSP and Velsicol will consolidate competition in the industry, unlikely to face new entrants*"¹⁴¹ and with regard to the US market and Emerald Kalama's position: "*significant capital investment to start up BA and salts in the US creates a barrier to entry*".¹⁴²

139 Response to Article 11 Request to distributors of benzoic acid, sodium benzoate and benzoate plasticisers 22 August 2008-Question 20

140 Velsicol's Investment Thesis for DSP

141 Velsicol's Investment Thesis Review, Point 4 of the Original Investment Thesis.

142 Velsicol STRAP Review with Arsenal Capital Partners, 11 September 2007.

6.1.8. Efficiency defence

251. On 29 September 2009, the notifying party submitted to the Commission an "Efficiency defence" document¹⁴³. Following the notifying party's submission, the proposed acquisition would create efficiencies that would (i) be specific to the transaction, (ii) bring benefits to consumers and (iii) be verifiable. The notifying party submitted that it would increase the benzoic acid purification capacity by [20,000-30,000]* tonnes, of which only [10,000-20,000]* tonnes would be used by the plasticizer plant that the notifying party intends to build in Rotterdam, and thus the remaining [5,000-10,000]* tonnes would be sold on the merchant market for benzoic acid. At the same time, the notifying party submitted that DSP has no plans to increase its benzoic acid capacity, and thus the merchant supply of benzoic acid would be only increased as a result of this transaction.
252. In accordance with paragraph 78 of the Horizontal Merger Guidelines: "For the Commission to take account of efficiency claims in its assessment of the merger and be in a position to reach the conclusion that as a consequence of efficiencies, there are no grounds for declaring the merger to be incompatible with the common market, the efficiencies have to benefit consumers, be merger-specific and be verifiable. These conditions are cumulative." In the present case, the efficiencies cannot be considered to be merger-specific, and it also appears that a higher amount of benzoic acid would be available for the merchant market in the absence of the proposed transaction. This is because DSP's own internal documents suggest that DSP plans to: "*grow the benzoic acid and sodium benzoate business by 30% over a three years period...*".¹⁴⁴ This is to be achieved by expanding the benzoate capacity at the Rotterdam site that was identified as the "preferred option" out four different options that DSP considered.¹⁴⁵ This preferred option includes (i) closing benzylaldehyde and benzyl alcohol production in Rotterdam, (ii) improving toluene efficiency, (iii) expanding benzoic acid capacity of 110 kta with full load sodium benzoate at 27 kta, (iv) investments for debottlenecking, (v) possible instalment of a flaker at a later stage.¹⁴⁶
253. When the Commission requested more information from DSP as to the feasibility of its plan to increase capacity at the Rotterdam site in the absence of the proposed transaction, DSP noted that: "*it can still increase capacity without any significant investments (so-called "creep"), which allow a smaller capacity increase than significant investments in debottlenecking (for which the costs have meanwhile increased substantially as compared to the 2006 estimate of EUR [...] million). DSP currently considers it will probably be able to increase BA capacity to [...] or even (possibly) [...] KT by optimising the current use of the production facility.*"¹⁴⁷ As

143 Keynote Memo, Benzoic Acid, 29 September 2009, pages 22 and 23

144 Slide 28 of DSP's "Business Strategy Dialogue 2007 – 2012", November 21 2006.

145 Slide 20 of DSP's "Business Strategy Dialogue 2007 – 2012", November 21 2006.

146 Slide 18 of DSP's "Business Strategy Dialogue 2007 – 2012", November 21 2006.

147 Email "RE: 5153 Arsenal/DSP-Request for information", 30 October 2008.

DSP's benzoic acid capacity was 84 KT in 2007¹⁴⁸, this implies that absent the transaction DSP would plan to increase its capacity by at least [10,000-20,000]* tonnes, which is a significantly higher amount than the combined entity could make available to the merchant market for benzoic acid. Thus, the efficiencies claimed by the notifying party are not only not merger-specific but even lower than what DSP could realize on its own absent the proposed transaction, which also implies that it would bring no benefits to consumers. Accordingly, such efficiencies cannot be considered as relevant for the assessment of the proposed transaction.

6.1.9. Conclusion

254. For the reasons set out above, it should be concluded that the proposed transaction, as notified, would lead to a significant impediment of effective competition in the EEA market for solid benzoic acid. In particular, the following factors identify the significant risk of the transaction resulting in a significant impediment of effective competition: (i) the combined entity would have a very high market share in the EEA, (ii) the parties are the closest competitors for EEA-based customers, (iii) the US and Chinese competitors do not currently exert any competitive pressure on Velsicol and DSP and it is not expected that they could discipline the merged entity in the event that the latter would unilaterally decide to increase prices in the EEA, (iv) the customers have no countervailing buyer power, and (v) it is unlikely that new competitors could set up production facilities in the EEA or anywhere else in the world.

6.2.SODIUM BENZOATE - UNILATERAL EFFECTS

255. The horizontal overlap between the parties' activities in the manufacture and supply of sodium benzoate will result in the merged entity becoming the sole producer of sodium benzoate in the EEA with a market share of [60-70]%.
256. However, it does not appear that market shares are correlated with market power even on an EEA-wide market in this case, as the EEA percentage gross margins of both of the parties have been decreasing over time. This is documented in Figure 4. Thus, as Chinese exports and world-wide trade have been increasing over time and the EEA producers have thus been subject to increased competition, their margins have decreased accordingly.

Figure 4: DSP's EEA sodium benzoate percentage gross margins

[...]*

Source: DSP

Figure 5: Velsicol's EEA sodium benzoate percentage gross margins

[...]*

Source: Velsicol

148 Slide 8 of the notifying party's presentation at the Oral Hearing, 27 October 2008.

6.2.1. *The role of Chinese imports*

257. The [25-45]% market share held by Chinese producers of sodium benzoate constitutes a constraint that would discipline the merged entity post-transaction should it intend to increase or increased prices above a competitive level. In previous merger cases, it has been considered that import market shares lower than 25% would already constitute a constraint on the entity resulting from the transaction.¹⁴⁹
258. The Commission's market investigation showed that the reasons for the difference in the level of imports into the EEA of benzoic acid and sodium benzoate are threefold. Firstly, the differences in quality between sodium benzoate produced in the EEA and that produced in China are smaller than in the case of benzoic acid. Thus, despite the fact that several EEA customers still consider that sodium benzoate produced in China is of inferior quality than that produced in the EEA and this still poses an obstacle to imports, several other EEA customers consider the quality of both products equivalent and thus purchase Chinese sodium benzoate directly from producers or from distributors. Secondly, unlike for benzoic acid, sodium benzoate that is imported from China may be up to 10% cheaper than the sodium benzoate that is produced in the EEA, which makes purchasing Chinese sodium benzoate more attractive, although it may be of lower quality. Thirdly, [...] the net margin realised on sales of sodium benzoate in the EEA is higher than the net margin realised on sales of benzoic acid in the EEA [...] .

6.2.2. *Spare capacity of competitors*

259. According to the submission of the notifying party and the results of the Commission's market investigation, there appear to be important spare capacities for the production of sodium benzoate.
260. With regard to the parties' key competitor in the EEA, Wuhan, the Commission's market investigation revealed the existence, and even an increase, between 2006 and 2007 of its excess capacity.
261. Wuhan recently created a joint venture for 25 years with Arsenal/Velsicol for the production of benzoate plasticizers. The joint venture is designed to use as its key input solid benzoic acid produced by Wuhan. The risk that this arrangement may have posed in connection with possible increased exports by Wuhan of sodium benzoate to the EEA is that any excess capacity of Wuhan for benzoic acid and sodium benzoate would not be used to increase exports of sodium benzoate to the EEA, but rather for the production of plasticizers by the joint venture.
262. In response to the Statement of Objections, the notifying party explained that the joint venture's production capacity currently only represents [0-10]*% of Wuhan's total production capacity for benzoic acid, and that the joint venture's ability to grow has been compromised. [...] .

¹⁴⁹ For example, in Case M.3188 ADM/VDBO, the Commission considered that 18.5% of imports into the United Kingdom were a significant level of imports which contributed to discipline the combined entity (paragraph 39).

263. The spare capacities of the Chinese producers and Wuhan in particular indicate that Wuhan would have the ability to supply more output to the EEA if the merged entity increased prices of sodium benzoate above a competitive level. However, while extremely tight supply conditions were reported for benzoic acid from May 2007 until the first quarter of 2008 following the simultaneous shutdowns of the Velsicol and DSP plants, this has not been reported for sodium benzoate. Again, this development is consistent with the findings regarding the parties' margins referred to in this Section.

6.2.3. Conclusion

264. Accordingly, the ability and incentive of the combined entity to increase prices post-merger in the EEA above a competitive level will be largely constrained by imports of sodium benzoate from China, as well as by the threat of increased imports from China. The notified transaction is therefore unlikely to lead to a significant impediment of effective competition even on an EEA-wide market for sodium benzoate.

6.3.SODIUM BENZOATE - COORDINATED EFFECTS

265. The Commission examined whether the proposed transaction would create or strengthen a collective dominant position on the market for sodium benzoate and found that it is unlikely that the transaction would lead to such an outcome. In this respect, no customer raised any concerns with regard to possible coordination on the market for sodium benzoate during the Commission's market investigation.
266. In examining the likelihood that the proposed transaction could create or strengthen a collective dominant position on the market for sodium benzoate, the Commission particularly followed[...] the approach adopted in the judgments of the Court of First Instance of the European Communities in *Airtours plc v. Commission*¹⁵⁰ and in *Independent Music Publishers and Labels Association (Impala, International Association) v. Commission*¹⁵¹. The Court of First Instance concluded that there are four *cumulative* conditions that must be satisfied in order for coordinated effects to arise post-transaction:¹⁵²
- (a) there must be easily recognizable terms of coordination for coordination to take place, and there must exist a credible and economically rational coordination mechanism;
 - (b) there must be sufficient market transparency so that each member of the dominant oligopoly has the ability to know how the other members are behaving in order to monitor whether or not they are adopting the common policy;

150 Case T-342/99 *Airtours plc v Commission*, judgement of 6 June 2002, [2002] ECR II-02585.

151 T 464/04 *Impala v. Commission*, judgement of 13 July 2006

152 T 464/04 -*Impala v. Commission*, Paragraphs 61 and 62.

- (c) there must be a means for other oligopoly members to retaliate against any departures from the common policy, so that members have an incentive not to depart from the common policy; and
 - (d) the foreseeable reaction of current and future competitors, as well as consumers, would not jeopardize the results expected from the common policy.
267. The Horizontal Merger Guidelines at paragraph 40 recognizes that: "Coordination may take various forms. In some markets, the most likely coordination may involve keeping prices above the competitive level. In other markets, coordination may aim at limiting production or the amount of new capacity brought to the market. Firms may also coordinate by dividing the market, for instance by geographic area or other customer characteristics, or by allocating contracts in bidding markets."
268. The Chinese producers have increased their sales in the EEA by over 400% in the period from 1999 to 2007 and currently account for around [25-45]% of the EEA market, of which [15-25]% is attributed to Wuhan, as explained in Recital 186. On a world-wide market, the Chinese producers would have about a [40-50]*% market share, of which around a [20-30]*% market share is attributed to Wuhan.¹⁵³ In addition to Wuhan, the Commission's market investigation revealed that the other important Chinese exporters of sodium benzoate that account for the rest of the Chinese exports are LiShui GuanShan, Jiahua Chemical and Tianjin Dongda.
269. Any coordination scheme would thus require the participation of the Chinese producers. If only the merged entity and Emerald, the US producer, engaged in a coordination scheme of any kind, it is likely that this would result in further increases of the Chinese exports into the EEA given that the Chinese exporters managed to increase their market share to [25-35]*% in the last nine years.
270. The question thus remains whether the Chinese producers would find it profitable to enter into a coordination scheme. Given that Chinese producers managed to increase exports to the EEA by 400% in the last nine years, it is unlikely that their behaviour would change post-transaction. In addition, there are four Chinese producers, and thus any coordination scheme would require the participation of most of them (if not all), as there appear to be large spare capacities in China. For example, Velsicol's Benzoic Acid & Sales Market Overview refers to: "*50% of Global Capacity*" or "*Significant available capacity, as much as 50 000 Mts*" with regard to China.¹⁵⁴ Thus, at least three (if not all four) Chinese producers would have to be engaged in the coordination scheme in order for the scheme to be effective.
271. The fourth condition for the test for coordination is thus not met. As all four of the conditions are cumulative, this implies that the proposed transaction cannot lead to the creation or strengthening of a collective dominant position in the sodium benzoate market. Accordingly, it should be concluded that the acquisition of DSP by Velsicol

¹⁵³ Table 7.2.31(b) of the Form CO.

¹⁵⁴ Paragraph 71 of the Response to the Statement of Objections.

does not increase nor create an incentive for the producers of sodium benzoate to coordinate their activities.

6.4.BENZOATE PLASTICISERS - VERTICAL EFFECTS

272. EEA mono-benzoate and di-benzoate plasticizer producers have expressed concerns that Velsicol/DSP could foreclose their access to benzoic acid by increasing prices of this necessary input for their production. Although the Commission has come to the conclusion that mono-benzoate and di-benzoate plasticizers are not directly substitutable, it could be argued that they are indirectly competing as they are used in formulas which can compete directly. Accordingly, following Recitals evaluate the likelihood that Velsicol/DSP could foreclose Evonik and Exxon/Mobil, both producers of mono-benzoate plasticizers, as well as Caffaro and Ferro, both producers of di-benzoate plasticizers.
273. According to paragraph 29 of the Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings ("the Non-horizontal Merger Guidelines")¹⁵⁵: "A merger is said to result in foreclosure where actual or potential rivals' access to supplies or markets is hampered or eliminated as a result of the merger, thereby reducing these companies' ability and/or incentive to compete....Such foreclosure is regarded as anti-competitive where the merging companies – and, possibly, some of its competitors as well – are as a result able to profitably increase the price charged to consumers".
274. In assessing the likelihood of such an anticompetitive input foreclosure scenario, it should be examined: (i.) whether the new entity would have the ability post-merger to foreclose access to inputs; (ii.) whether it would have the incentive to do so; and (iii.) whether a foreclosure strategy would have a significant detrimental effect in the downstream market.
275. As explained in Section VI.D.1., although the merged entity will have the (albeit limited) ability to foreclose the mono-benzoate and di-benzoate plasticizer producers, it will not have the incentive to do so, and thus the proposed transaction will have no effect on the downstream market for benzoate plasticizers.

6.4.1. Ability

276. The analysis developed in the following Recitals focuses on whether the merged entity would be able to substantially foreclose its competitors active in the downstream markets (production of mono-benzoate and di-benzoate plasticizers) either by increasing prices or by restricting access to inputs produced in the upstream market (production of benzoic acid).
277. The Non-horizontal Merger Guidelines point to three conditions which are indicative that the merged entity could have the ability to foreclose its downstream competitors, namely: (i) the existence of a significant degree of market power in the upstream market; (ii) the importance of the input; and (iii) the possibility to negatively affect the

¹⁵⁵ OJ C 265, 18.10.2008, p. 10

overall availability of inputs/ absence of timely and effective counter-strategies.¹⁵⁶ Those conditions are discussed in the following Recitals.

6.4.1.1. Existence of a significant degree of market power on upstream market

278. The largest EEA benzoate plasticizers producers use liquid benzoic acid in their production processes. According to the notifying party, a small Spanish producer uses solid benzoic acid but has a limited production and does not compete significantly with Velsicol in the EEA. Exxon Mobil started its production of mono-benzoate plasticizers in 2007 with solid benzoic acid¹⁵⁷. [...] * All other EEA producers use liquid benzoic acid.
279. It is more convenient to use liquid benzoic acid rather than solid benzoic acid for the production of benzoate plasticizers, as benzoate plasticizers' production requires liquid inputs. Liquid benzoic acid cannot be supplied to EEA producers of benzoate plasticizers from outside the EEA because the liquid solidifies rapidly at normal temperature. While Velsicol's downstream competitors could alternatively use solid benzoic acid, Section V.A 'Benzoic Acid' clearly shows that the Chinese and the US competitors are not credible alternatives, as these competitors have almost no commercial presence in the EEA and cannot easily increase their sales in the EEA.
280. After the acquisition of DSP by Velsicol, the merged entity will become a producer of di-benzoate plasticizers and in particular the only available supplier of liquid benzoic acid for its EEA downstream competitors that will have 100% of the liquid benzoic acid market. If benzoate plasticizer producers were to decide to use solid benzoic acid, the combined market share of Velsicol/DSP in the EEA would be [90-100]%. The merged entity will therefore have a significant degree of market power in the supply of both liquid and solid benzoic acid to producers of benzoate plasticizers.

6.4.1.2. Importance of the input

281. Benzoic acid is the core component used to produce di-benzoate plasticizers. 0.75 of a tonne of benzoic acid is necessary to produce one tonne of di-benzoate plasticizer¹⁵⁸. In particular, no substitute exists to replace benzoic acid in the production of benzoate plasticizers and benzoic acid is a necessary input for the production of benzoate plasticizers. Benzoic acid accounts for approximately [55-60]% of the variable costs of the production of di-benzoate plasticizers.

6.4.1.3. Existence of timely and effective counter-strategies

282. Velsicol/DSP could foreclose its downstream competitors by either increasing prices for liquid benzoic acid or by restricting sales of liquid benzoic acid to its downstream

¹⁵⁶ Cf. in particular paragraphs 34, 35 and 36 of the Non-horizontal Merger Guidelines.

¹⁵⁷ Similar production processes are used for both mono-benzoate and di-benzoate plasticizers.

¹⁵⁸ The notifying party also submitted that 0.5 of a tonne is required to produce one tonne of mono-benzoate plasticizer.

competitors in the EEA, as the merged entity will be the sole producer of liquid benzoic acid in the EEA.

283. It is likely that if Velsicol/DSP were to pursue such a foreclosure strategy, it would also apply it to solid benzoic acid by either increasing its prices or restricting the amount available to the benzoate plasticizers producers. This is because large customers for solid benzoic acid obtain prices which are similar to those obtained by customers purchasing liquid benzoic acid, as submitted by the notifying party in its response to the Statement of Objections. For example, the two largest customers of DSP in the EEA for solid benzoic acid pay respectively EUR [...]*/tonne and EUR [...]*/tonne excluding transportation costs. DSP submitted that the average price for liquid benzoic acid is EUR [...]*/tonne¹⁵⁹ excluding transportation costs. This would account for differences of respectively [5-10]*% and [5-10]*% between liquid and solid forms. Those two customers purchase respectively [...]*/tonne and [...]*/tonne annually, which is comparable to the purchases of the smallest customers for liquid benzoic acid, and thus the price differences may be even smaller for larger purchasers of liquid benzoic acid.
284. Benzoate plasticizer producers would therefore need to purchase solid benzoic acid either from distributors or from non-EEA producers. Such a solution would result in an increase in their costs for the following reasons:
- (a) The prices of solid benzoic acid distributors are higher than the prices of solid benzoic acid direct producers, as they need to include their own margins. In addition, distributors generally do not handle large quantities.
 - (b) Non-EEA suppliers are not considered as credible competitors in the EEA, because (i) the prices of benzoic acid from outside the EEA are significantly higher than in the EEA due to transport costs and tariffs, (ii) [according to the notifying party] the US producer, Emerald, has no spare capacities for the production of solid benzoic acid and indicated that it would increase these capacities only in response to price increases that are significantly higher than [10-20]*%, and (iii) the quality of the benzoic acid of Chinese producers is not comparable to the quality of the EEA product.
285. It should therefore be concluded that the merged entity will have market power vis-à-vis its downstream competitors in regard to the supply of benzoic acid, although the ability to foreclose is limited due to the long-term contracts between the merged entity and some customers (See following Section).

6.4.1.4. Customer contracts

286. Exxon Mobil has signed a long term contract with DSP for the supply of liquid benzoic acid, which will last until [...]*/tonne. The contracts of Evonik and Caffarro with DSP will terminate respectively in December [...]*/tonne and November [...]*/tonne.

159 Response of the notifying party to the Questionnaire 22 August 2008. Prices include transportation costs.

287. Ferro's contract will terminate in [...]*. However, on [...]*, DSP proposed a new five-year contract to Ferro for the provision of liquid benzoic acid that will ensure that Ferro will have competitive access to liquid benzoic acid under competitive conditions until at least [...]*.¹⁶⁰ The proposed contract will also guarantee that Ferro will have access to a maximum volume of benzoic acid of [...]* tonnes per year, which amounts to [...]* times the volume Ferro purchased in 2007, and [...]* times the volume Ferro is expected to purchase in 2008. Such volume is therefore deemed to be largely sufficient for Ferro to continue to increase its production of di-benzoate plasticizers.

6.4.2. *Ability - conclusion*

288. It should therefore be concluded that while the merged entity will have market power vis-à-vis its downstream competitors in regard to the supply of benzoic acid, its ability to foreclose the downstream competitors would be limited due to the existence of long-term contracts.

6.4.3. *Incentive*

289. Pre-merger, DSP is not in competition with the producers of benzoate plasticisers and has an incentive to supply them with benzoic acid at a price which is sufficiently competitive to enable these producers to profitably remain in the market. The notifying party in particular argued that although DSP is in a monopoly situation for the supply of liquid benzoic acid in the EEA, increasing prices of liquid benzoic acid above a certain price level could impair the viability of DSP's customers and therefore create a risk that customers that generally purchase large volumes of liquid benzoic acid will be lost.

290. The acquisition of DSP by Velsicol changes the incentive of DSP as it will then be part of a vertically integrated company supplying benzoic acid, but also producing di-benzoate plasticizers. DSP/Velsicol's incentive to foreclose its downstream competitors will thus depend on the profitability of such a foreclosure strategy.

291. When considering the profitability of an input foreclosure strategy, the merged entity faces a trade-off between the profits lost in the upstream market (benzoic acid) due to a reduction of input sales and the profit gained on the downstream market (di-benzoate plasticizers) by raising its rivals' costs.

292. That trade-off depends on the level of profits that the merged entity obtains upstream and downstream. As described in the Non-horizontal Merger Guidelines¹⁶¹, it further depends on two other critical factors: (i.) the extent to which downstream demand is likely to be diverted away from foreclosed rivals; and (ii.) the share of that diverted demand that the downstream division of the integrated firm can capture.

¹⁶⁰ The terms of the contract [...]* reflect the most recent market conditions with regard to price and delivery obligations notably. These terms are by definition competitive as they were negotiated between DSP and Exxon Mobil in [...]*, largely before the date when Velsicol approached DSP.

¹⁶¹ Paragraph 42.

6.4.3.1. Upstream and downstream profits

293. The notifying party submitted that the average price at which DSP sells liquid benzoic acid in the EEA is EUR [...] per tonne, and that its average gross margin (selling price minus variable costs) is EUR [...] per tonne¹⁶². The notifying party also submitted that the gross margin of Velsicol for sales of di-benzoate plasticizers is EUR [...] per tonne in the EEA.
294. Considering that the production of one tonne of di-benzoate plasticizer requires 0.75 tonne of benzoic acid (0.5 ton of benzoic acid for one tonne of mono-benzoate plasticizer), the gross margin obtained by the parties when selling the quantity of benzoic acid necessary to produce one tonne of di-benzoate plasticizer is EUR [...] (EUR [...] to produce one tonne of mono-benzoate plasticizers). It should be compared to the EUR [...] margin obtained by the parties when selling one tonne of di-benzoate plasticizer, which is a larger difference with regard to mono-benzoate plasticizers).
295. As the gross margin obtained by Velsicol/DSP in selling one tonne of di-benzoate plasticizer is approximately more than the gross margin it obtains when selling the quantity of benzoic acid necessary to make one tonne of di-benzoate plasticizers, the foreclosure strategy would be profitable if Velsicol/DSP could capture more than [50-60]% of the sales lost by a di-benzoate competitor. In other words, the new entity could afford to lose all sales of benzoic acid to a particular downstream competitor producing di-benzoate plasticizers, if it captures more than [50-60]% of the sales of di-benzoate plasticizers of this competitor. On the contrary, if Velsicol/DSP cannot capture more than [50-60]% of the sales of this competitor, it is unlikely that the foreclosure strategy would be profitable.
296. With regard to mono-benzoate plasticizer producers, the foreclosure strategy would be profitable if Velsicol/DSP would replace more than [30-40]% of the sales of mono-benzoate plasticizers of the foreclosed competitor by its own di-benzoate plasticizers.

6.4.3.2. Lack of incentive to foreclose mono-benzoate plasticizer producers

297. In the case of competitors producing mono-benzoate plasticizers, it is unlikely that Velsicol could divert sufficient downstream demand from foreclosed producers of mono-benzoate plasticizers to render the foreclosure strategy profitable.
298. Mono-benzoate plasticizers are used in particular in formulas of producers of PVC flooring, who are not sensitive to regulation issues applying to phthalate plasticizers. Mono-benzoate plasticizers are not directly substitutable by di-benzoate plasticizers, but can be included in directly competing formulas. This means, for instance, that a formula "A" containing 20% of mono-benzoate plasticizers and 80% of phthalate plasticizers could have the same technical characteristics as another formula "B" containing 90% of di-benzoate plasticizers and 10% of another phthalate plasticizer. This also means that the formula "A" could have similar characteristics as other formulas "C", "D", or equivalents, composed exclusively of phthalate plasticizers. The

162 Response to questionnaire to the notifying party 22 August 2008. Question No 22.

Commission did not find any evidence that formulas including mono-benzoate plasticizers are competing more with formulas including di-benzoate plasticizers than with formulas including only phthalate plasticizers. It should be recalled that phthalate plasticizers account for approximately 90% of all plasticizers, whereas di-benzoate plasticizers and mono-benzoate plasticizers together account for approximately 1%.

299. If mono-benzoate plasticizers were to become more expensive, it is likely that a large proportion of customers would prefer to replace mono-benzoate plasticizers by substitutable phthalate plasticizers (one to one) rather than testing a new formula. In the event that those customers were to decide to test a new formula, there is no particular reason to believe that they would favour a formula containing di-benzoate plasticizers.
300. Consequently, it is very unlikely that Velsicol/DSP could capture more than 38% of sales lost by a foreclosed mono-benzoate plasticizer producer. It should therefore be concluded that the notifying party will have no incentive to foreclose Evonik and Exxon Mobil.

6.4.3.3. Lack of incentive to foreclose Caffaro

301. Caffaro is a small competitor in the EEA market for di-benzoate plasticizers [...]*. Consequently, Caffaro has not been a constraint on Velsicol in the past, and there are no indications that it could become a significant constraint in the future. Velsicol thus would have limited incentive to foreclose that competitor.
302. In addition, Caffaro purchases benzoic acid to produce both ketones and di-benzoate plasticizers, and uses more than [>50]*% of this benzoic acid for the production of ketones. DSP is currently the only supplier of liquid benzoic acid who can supply Caffaro. Any incentive of DSP to further increase prices of liquid benzoic acid sold to Caffaro for the production of ketones would not be modified by the proposed transaction, because neither DSP nor Velsicol produce this product. It is thus reasonable to consider that DSP has already set a price for liquid benzoic acid corresponding to its optimal profitability. Therefore, any price increase is likely to result in a loss for DSP, either because Caffaro would increase its price for ketones, and consequently decrease its sales and its purchase of liquid benzoic acid, or because Caffaro would be driven out of the business.
303. A foreclosure strategy applied to Caffaro would thus also need to be evaluated with regard to potential losses of sales of liquid benzoic acid used for the production of ketones.
304. If Velsicol/DSP were to foreclose Caffaro to increase its cost of production for di-benzoate plasticizers, it would have to increase the price of liquid benzoic acid for all volume supplied to Caffaro. In particular, the price increase would have to apply to the liquid benzoic acid used to produce both ketones and di-benzoate plasticizers as DSP cannot discriminate between the two usages.
305. For a foreclosure strategy to be efficient, a price increase of the input would have to be substantial. By doing so, Velsicol/DSP would risk losing substantial sales of the liquid benzoic acid used to produce ketones. As those sales account for more than [>50]*% of sales to Caffaro, it appears very unlikely that Arsenal/DSP would take

such a risk, in particular in view of the limited competitive constraint exerted by Caffaro on Velsicol.

306. It should therefore be concluded that the merged entity will have no incentive to foreclose Caffaro, as it is unlikely that the merged entity will capture a significant proportion of its customers to replace lost sales of benzoic acid (used for the production of both ketones and di-benzoate plasticizers).

6.4.3.4. Lack of incentive to foreclose Ferro

307. Ferro is a large producer of phthalate plasticizers, principally BBP which is technically directly substitutable to di-benzoate plasticizers. Ferro entered the market for di-benzoate plasticizers in 2005. It currently produces more di-benzoate plasticizers than Caffaro and may sell more di-benzoate plasticizers in the EEA than Emerald by 2009. In addition, Ferro can leverage its commercial network and its long-term relationship with its customers in the market for BBP. Thus, at a face value, Ferro may possibly be seen as an important competitor to Velsicol in the di-benzoate plasticizer market.
308. However, while Ferro's sales have increased since its entry in 2005¹⁶³, Ferro still accounts for [0-10]% of the di-benzoate plasticizer market and is still about one eighth of the size of the leading producer Velsicol. In addition, while Velsicol operates three benzoate plasticizer plants around the world (with a joint venture in China with its partner Wuhan), Ferro [...]*. The limited competition between Ferro and Velsicol and in particular the limited constraint that Ferro exercises on Velsicol is also highlighted by the fact that Velsicol cannot identify any material business it has won or lost to Ferro in the last five years. In addition, Ferro uses about [...]">% of the liquid benzoic acid that its long-term contract with DSP affords it and, according to the notifying party, [...]>*as opposed to Velsicol.¹⁶⁴
309. As Ferro does not currently constrain Velsicol, the merged entity will thus not have an incentive to foreclose Ferro, as the foreclosure strategy would result in the loss of liquid benzoic acid sales, while it is unlikely that it would divert large enough sales to Velsicol to outweigh these losses, and in any event, DSP has recently offered a long-term contract to Ferro for supply of liquid benzoic acid.

6.4.3.5. Incentive - conclusion

310. It should therefore be concluded that the merged entity would not have an incentive to foreclose either the mono-benzoate plasticizer producers or the di-benzoate plasticizer producers.

¹⁶³ According to the notifying party, Ferro has multiplied its production of di-benzoate plasticizers by [...]>* between 2005 and 2008.

¹⁶⁴ Although Ferro's contract for liquid benzoic acid is for [...]>* tonnes per year, Ferro has been able to achieve an off-take of only [...]>* tonnes in 2007 and is the smallest liquid benzoic acid customer of DSP's by a substantial margin (see Paragraph 209 of the notifying party's response to the Statement of Objections).

6.4.4. *Impact in downstream market*

311. The overall effects of the vertical integration of DSP and Velsicol must be assessed in the downstream market. As stated in the Non-horizontal Merger Guidelines, "In general, a merger will raise competition concerns because of input foreclosure when it would lead to increased prices in the downstream market thereby significantly impeding effective competition"¹⁶⁵.
312. In the present case, as Velsicol/DSP will have limited ability to foreclose, and in any case no incentive to foreclose any of its competitors in the EEA, the proposed transaction has no impact in the downstream market.

6.4.5. *Conclusion*

313. It should therefore be concluded that the transaction would not lead to a significant impediment of effective competition in the EEA market for di-benzoate plasticizers, as the merged entity will have limited ability to foreclose and in any case no incentive to foreclose either mono-benzoate or di-benzoate plasticizer producers.

6.5. REMEDIES

6.5.1. *Description of the initial set of remedies*

314. On 6 November 2008, the notifying party proposed an initial set of remedies to address the Commission's concerns that the proposed transaction could lead to a significant impediment of effective competition in the EEA. The notifying party thus proposed divesting a number of assets of Velsicol's plant in Estonia. The divested business relates to Velsicol's world-wide solid technical grade benzoic acid business and its world-wide sodium benzoate business. The divested business also includes the creation of a production joint venture ("the proposed joint venture") that will produce liquid technical grade benzoic acid.
315. The purchaser of the divested business ("the purchaser") will then fully acquire assets and personnel related: (i) to the production of solid benzoic acid (flakes) and (ii) sodium benzoate from Arsenal/Velsicol, (iii) and will jointly control the proposed joint venture producing the liquid benzoic acid on site. The production facility of liquid benzoic acid has a current maximum operational capacity of [...] Ktpa¹⁶⁶.
316. Post acquisition, Velsicol's Estonian plant will be split into three different entities.
- (a) The proposed joint venture producing liquid benzoic acid will be created. The notifying party will own [>50]*% of the shares issued for it, whereas the purchaser will own the remaining [<50]*%. However, the proposed joint venture will be jointly controlled by the purchaser and the notifying party, and the notifying party will therefore not have any additional right to control the functioning of the proposed joint venture due to its majority shareholding. Each of

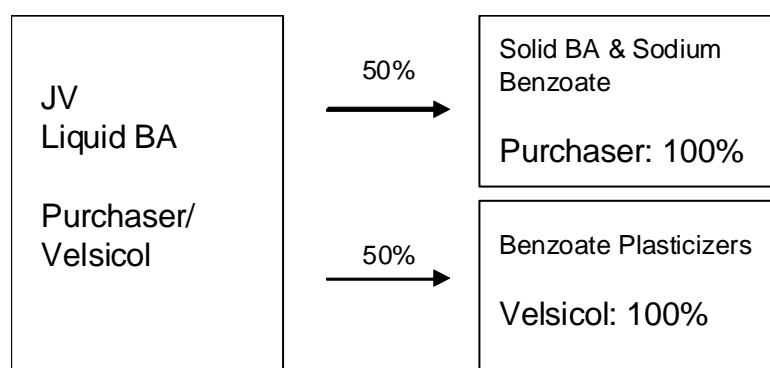
¹⁶⁵ Paragraph 47.

¹⁶⁶ Kilo tonne per annum

the two partners in the proposed joint venture will receive 50% of the production of liquid benzoic acid, and this 50% represents [...] Ktpa.

(b) All the assets necessary for the production and sales of solid benzoic acid and sodium benzoate will be fully divested to the purchaser.

(c) All assets necessary for the production and sales of benzoate plasticizers will be fully owned the notifying party.



317. The proposed joint venture will include all the necessary assets, personnel and know-how (that is to say, a royalty free licence from Velsicol) to be run independently. Fixed costs will be shared on an equal basis: each of the two partners will pay 50% of the fixed costs, whatever their respective purchase of liquid benzoic acid. Variable costs will be paid by each operator on a pro rata basis between the partners based on their actual purchases. With regard to investments in the proposed joint venture in order to expand capacity, any partner will be able to undertake expansion at its own costs in case the other partner does not want to participate. In such a case, the partner that undertakes the expansion will receive the full additional production of liquid benzoic acid. In addition, Velsicol will offer a transitional services agreement to cover any residual services which will not be provided by Velsicol at cost, depending on the precise requirements of the purchaser and the proposed joint venture.
318. The purchaser will acquire sole control over the production of solid benzoic acid and sodium benzoate and Velsicol's worldwide customer lists for both benzoic acid and sodium benzoate. As Velsicol currently uses more than 50% of its production of liquid benzoic acid for its worldwide production of benzoic acid and sodium benzoate, the capacity allocated to the purchaser will only be sufficient to produce [80-90]% of Velsicol's 2007 production of benzoic acid and sodium benzoate. As a consequence, although the purchaser will be able to service all of Velsicol's benzoic acid and sodium benzoate customers in the EEA, it will not be able to service all of Velsicol's worldwide customers.

6.5.2. *Assessment of the initial set of remedies*

Market test of the remedies

319. On 7 November 2008 the Commission launched a market investigation on the initial set of proposed remedies. The result of the market investigation was largely negative since 12 out of 15 respondents considered that the proposed divestment is unlikely to

restore competition post acquisition, although it will be shown that a number of the concerns expressed by the respondents can be dismissed.

320. Among the concerns expressed by the participants and relating to issues for which the Commission has identified competition concerns in the present Decision, a distinction should be made between (i) merger-specific issues and (ii) non merger-specific issues. The Commission's assessment and appraisal of the results of the market test only focuses on the merger-specific issues.

Non Merger specific concerns

321. The respondents to the Commission's market investigation raised several competition concerns which are not linked to the merger.
322. For instance, some respondents emphasised the 'insufficient production capacity of benzoic acid' in the Estonian plant. However, as the whole overlap between the merging parties was offered to be divested, and the Estonian plant was already constrained prior to the proposed transaction, this argument can be dismissed.
323. Some competitors to the parties to the proposed transaction expressed concerns regarding the 'level of purity of liquid benzoic acid' that the divested business would be able to produce. However, as Velsicol was able to capture [40-50]% of the EEA merchant market for benzoic acid and currently provides a significant constraint on DSP, it follows that Velsicol's purity level of liquid benzoic acid must have been sufficient to effectively compete prior to the proposed transaction.
324. Finally, some respondents expressed concerns that there will be 'only one supplier of liquid benzoic acid post merger. However, this corresponds to the situation pre-merger, where DSP's Rotterdam plant was already the only supplier of liquid benzoic acid in the EEA merchant market, as Velsicol's Estonian plant only used liquid benzoic acid captively.
325. Thus, given that the aim of the proposed remedies is to remove competition concerns raised by the proposed transaction, such non merger-specific concerns are not be further assessed in this Decision.

Merge-specific concerns

326. The result of the Commission's market investigation shows that the most significant concerns expressed by the respondents relate to the proposed joint venture to be created by the purchaser and the notifying party. According to the vast majority of respondents, such a structural link between the divested business and the notifying party is unlikely to remove the competition concerns raised by the proposed transaction. It has been submitted, in particular, that it would endanger the long term viability of the divestment package as an effective competitive constraint in the market for solid benzoic acid.
327. The respondents to the market investigation did not question the technical functioning of the proposed joint venture. They seemed to consider that the transfer of assets and personnel should allow the proposed joint venture to be operational. However, the majority of respondents considered that a number of features of the proposed joint

venture arrangement would allow Velsicol to influence the divested business to its own interest.

328. The majority of respondents considered that the joint control offered by the remedy package as initially proposed would restrict the purchaser's ability to develop the divested business independently. The respondents notably emphasised that the principle of common decision-making would seriously jeopardise the everyday running of the proposed joint venture.
329. Customers and competitors also expressed concern that the proposed initial set of remedies would allow the notifying party to have indirect control of its partner in the proposed joint venture. Firstly, the full capacity production of solid benzoic acid would be divested to the purchaser. However, liquid benzoic acid is the essential input and represents most of the production costs of solid benzoic acid. Some respondents also emphasised that the proposed joint venture would allow Velsicol to keep indirect control of the purchaser's production of solid benzoic acid. Secondly, the proposed joint venture would allow the Parties to be aware of the cost and price structure of its only benzoic acid competitor in the EEA.
330. The majority of respondents also emphasise that the proposed joint venture would restrain the purchaser's production capacity.
- (a) Firstly, they considered that the capacity of liquid benzoic acid allocated to the Purchaser is insufficient to even supply all of Velsicol's former customers.
- (b) Secondly, they believed it would be unlikely that Velsicol would be interested in increasing capacity in Estonia but instead would be interested in increasing its capacity in Rotterdam. Therefore, should Velsicol not be interested in an increase of capacity, the purchaser would have to unilaterally increase its production capacity. However, in doing so, it would have to bear all the related costs for an increase of capacity which, according to the notifying party would have to be at least 20Ktpa. Such capacity expansion would represent more than 50% of the EEA demand for solid benzoic acid and would certainly result in a heavy financial burden for the purchaser. The respondents also indicated that it is unlikely that the purchaser would undertake such investments if it would not obtain, in return, the majority shareholding of the proposed joint venture and thus control of the proposed joint venture.
- (c) Thirdly, some competitors complained that the agreement for the proposed joint venture would not allow the purchaser to modify the purity level of its liquid benzoic acid without the prior consent of the notifying party.
331. Finally, pursuant to the agreement for the proposed joint venture, the notifying party would transfer to it all the necessary know-how. However, the partner to the proposed joint venture would only be allowed to use such technology for the Estonian plant. Several respondents considered that such a limited know-how licence would be anticompetitive by preventing the purchaser from developing its business outside the Estonian plant.

Assessment of the Remedies by the Commission

332. Following the Commission's market investigation, there is a general consensus among competitors and customers that the proposed initial set of remedies are unlikely to restore competition. As mentioned in Recital 320, this Decision only focuses on the merger-specific concerns raised by the respondents.
333. The Commission's market investigation shows that most of the concerns expressed by the respondents focused on the fact that the proposed joint venture would maintain structural links between the purchaser and the notifying party.
334. Some concerns expressed by the respondents do not appear to be relevant for the assessment of the remedies. One competitor, for example, emphasised that information could be leaked from the proposed joint venture to the Rotterdam plant. Firstly, joint ventures are standard practices in the chemical business and producers are used to dealing with such confidentiality issues. Secondly, the know-how will be transferred from Velsicol and thus any concern on confidentiality should rather be raised by the notifying party.
335. Although, increasing the purity of the liquid benzoic acid produced by the proposed joint venture will depend on a common agreement between the purchaser and the notifying party, this should not create such a considerable constraint on the purchaser. Even if it could be argued that the notifying party could have the incentive to weaken the purchaser's solid acid benzoic business by preventing it from increasing its quality, it should be pointed out that Velsicol has been a successful competitor in this market with its current level of quality.
336. In addition, there are no grounds for the claim made by some respondents that the capacity of liquid benzoic acid allocated to the parties is insufficient. The planned allocation of liquid benzoic acid capacity would not be sufficient to satisfy all of Velsicol's current customers. However, as acknowledged by several respondents, the purchaser will very likely first supply its EEA customers since it obtains higher margins from them than from non-EEA customers. The conditions of competition in the EEA should thus not be affected¹⁶⁷.
337. Similarly, it is unlikely that the proposed joint venture will result in cost increases and increased price transparency compared to other divestment options. Even if the complete liquid benzoic plant were divested, Velsicol would still have a good knowledge of the purchaser's costs since it has operated the liquid benzoic plant for years, and its plasticizer plant would still continue to be supplied by the liquid benzoic acid plant.
338. The restriction of the licence relating to the know-how to the Estonian plant is also unlikely to raise competition issues in the context of the EEA market, as it is unlikely that a new factory would be built in the EEA in the near future.

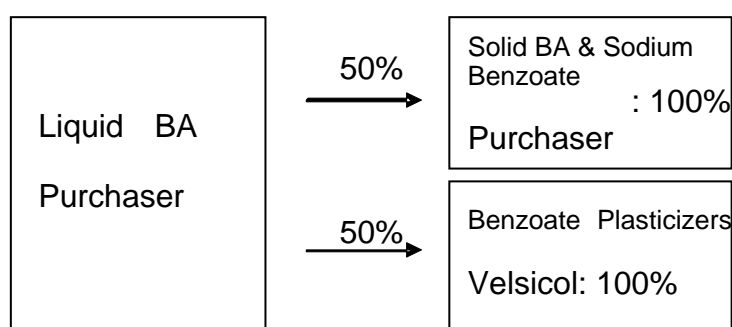
¹⁶⁷ In addition, if the purchaser is already active on the market for benzoic acid, it will be able to supply former Velsicol's customers from other production sites.

339. However, there is a clear indication from the Commission's market investigation that the proposed joint venture, as currently proposed in the remedies package, would not restore competition. This is because the purchaser would be required to consult Velsicol before taking any strategic decision regarding the upstream production of liquid benzoic acid, which would prevent the purchaser from competing effectively against Velsicol (its only competitor) on the market for solid benzoic acid. This finding from the market investigation is in line with the Commission's general preferences that the divested business should operate on a 'stand-alone basis'. As stated in paragraph 32 of the Commission notice on remedies acceptable under Council Regulation (EC) No 139/2004 and under Commission Regulation (EC) No 802/2004 "Normally, a viable business is a business that can operate on a stand-alone basis, which means independently of the merging parties as regards the supply of input materials or other forms of cooperation other than during a transitory period."¹⁶⁸
340. In addition, as expressed by some respondents, there is a risk that the proposed joint venture agreement, as submitted by the notifying party in the initial set of proposed remedies would prevent the purchaser from increasing its production of solid benzoic acid. In particular, it is very unlikely that the notifying party would decide to join the purchaser in a decision to expand the proposed joint venture production capacity. This is because Velsicol could undertake such a capacity increase by itself at the Rotterdam site that it solely owns and where, according to the parties' capacity increase, could be made in a cheaper way. In addition, Velsicol may prefer to undertake the capacity increase in Rotterdam even if it would be profit maximizing to undertake such capacity increase at the Estonian site, as this would negatively affect the purchaser's ability to compete on the EEA market for solid benzoic acid. As any capacity expansion of liquid benzoic acid is not foreseen to result in a modification of the control of the proposed joint venture, it is thus very unlikely that the purchaser would undertake any expansion of capacity on its own because it would bear high costs and would not increase its shareholding in the proposed joint venture and thus assume the control of the proposed joint venture. In this respect, the Commission's market investigation clearly concluded that any increase by the purchaser of its capacity of liquid benzoic acid at its own cost should grant the purchaser a increased share in the shareholding of the proposed joint venture and in its control.
341. To conclude, it is unlikely that the initial set of proposed remedies submitted by the notifying party on 6 November 2008 would form a divested business that would be viable, because any strategic decision of the purchaser would have to be agreed to by Velsicol, its only competitor on the EEA-wide market for solid benzoic acid. This is also confirmed by the results of the Commission's market investigation. There is a general consensus among the market participants that the notifying party would keep *de facto* control of the production of solid benzoic acid. The proposed initial set of remedies, while removing some of the competition concerns raised by the proposed transaction, was therefore not deemed sufficient to dispel the concerns of the Commission. Accordingly, the Commission informed the notifying party on 20 November 2008 that the proposed remedies could not be accepted.

¹⁶⁸ Paragraph 32 of the Commission notice on remedies acceptable under Council Regulation (EC) No 139/2004 and under Commission Regulation (EC) No 802/2004 (OJ C 2008, 22.10.2008, p. 1).

6.5.3. Description of the amended set of remedies

342. The notifying party consequently submitted an amended set of remedies on 3 December 2008, that modify the initial set of proposed remedies submitted on 6 November 2008, by providing for the full divestment of the upstream liquid benzoic acid plant (while maintaining the divestment of the two downstream solid benzoic acid and sodium benzoate plants at the Estonian site together with the transfer of Velsicol's worldwide customers for solid benzoic acid and sodium benzoate as provided for already in the initial set of remedies). The third remaining downstream plant at the Estonian site for the production of benzoate plasticizers will remain in Velsicol's ownership, and its requirements for liquid benzoic acid will be served by a long-term (evergreen) contract with the purchaser of the divested business. In this regard it should be noted that long-term supply agreements are common practice in the chemical industry and, in particular, with regard to the supply of liquid benzoic acid.¹⁶⁹
343. Under that long-term contract, the Purchaser of the divested business will be under the obligation to supply 50% of its liquid benzoic acid capacity to Velsicol on the basis of current costs and a pricing formula index, although Velsicol will have no obligation to purchase this volume. The absence of obligation on the part of the purchaser to buy all the volume specified in the supply agreement is common practice in the industry, as illustrated by the contracts concluded by DSP with its own customers for the supply of liquid benzoic acid.¹⁷⁰ Nevertheless the Purchaser of the divested assets will have the possibility to negotiate with Arsenal/Velsicol the conditions under which Velsicol will purchase the liquid benzoic acid in order to anticipate the needs of Velsicol and to optimize its process. The commitments foresee that "the Divestment business will supply specified volumes to a defined delivery schedule"¹⁷¹. The conditions to set the delivery schedule will be negotiated between the Purchaser of the divested assets and Velsicol at arms length.
344. The following picture shows how the Estonian site would be divided under the second remedies proposal of 3 December 2008:



¹⁶⁹ See the reference to the long-term contracts concluded by DSP for the supply of liquid benzoic acid with its customers in recitals 286 and 287.

¹⁷⁰ For example, although the agreement between DSP and Ferro for the supply of liquid benzoic acid specifies an off-take volume of 6,000 tonnes per year, Ferro only purchased 707 tonnes in 2007.

¹⁷¹ Commitments – Schedule 1 – *Liquid technical grade benzoic acid assets and activities* - Recital 2.(n)(v)

6.5.4. *Assessment of the amended set of remedies*

345. The amended set of remedies would thus overcome all the concerns that the Commission considered initially as being relevant, and most importantly the concerns raised by most of the respondents in relation to the proposed joint venture to be created by the purchaser and Velsicol for the upstream production of liquid benzoic acid. The divestment of the entire upstream liquid benzoic acid plant will remove the structural link between Velsicol and the purchaser, the only two producers of solid benzoic acid in the EEA.
346. The amended set of remedies will further resolve the concerns raised in the Commission's market test that the purchaser of the divested asset would not have any incentive to undertake any capacity expansion at the Estonian site in the framework of the proposed joint venture in which it would have a minority shareholding. All of the issues referred to VI.E.2 and more largely described in Recitals 339 and 340 would be clearly overcome by the full divestment of the upstream liquid benzoic acid plant, as the purchaser would no longer be dependent on Velsicol for any of its strategic decisions and thus would be able to compete independently and effectively in the EEA market for merchant sales of solid benzoic acid. This has also been confirmed by the respondents, as two of them noted that while they would be interested in buying the upstream liquid benzoic acid plant along with the two downstream plants for solid benzoic acid and sodium benzoate, they would not be interested in the proposed joint venture option.¹⁷²
347. The last issue that needs to be considered is whether the increased transparency that stems from the evergreen supply agreement between the Purchaser of the divestment business and Velsicol (and thus Velsicol's knowledge of the Purchaser's costs) may have a negative effect on the EEA market for solid benzoic acid. However, as discussed in Paragraph 227, toluene (the main input in the production of liquid benzoic acid) accounts for 91% of liquid benzoic acid costs. Given that toluene prices are closely related to crude oil prices (as toluene is a by-product in the production of gasoline), almost all production costs of liquid benzoic acid are already known, as toluene prices are directly related to crude oil prices that are publically known. It is thus unlikely that the additional transparency (i.e. the remaining 9% of the liquid benzoic acid costs) due to the evergreen supply agreement may adversely impact the level of competition in the EEA market for solid benzoic acid.
348. In addition, the amended set of remedies would also address any remaining vertical competition issues (if there were to be any). This is because any successful foreclosure strategy would require the merged entity to increase the prices of both liquid and solid benzoic acid (see Recital 283). As a result of those remedies, there will, however, be a second independent source of solid and liquid benzoic acid in the EEA, and thus the merged entity will not have the ability or incentive to foreclose the

172 It should be noted that one of these two respondents stated that they would also look into buying into the proposed joint venture. However, according to this respondent, it is unlikely that a deal could be reached due to the complexity that would be associated with such a transaction.

downstream competitors in the benzoate plasticizer market, as these downstream competitors could now start purchasing their benzoic acid requirements from the purchaser of the divested business.¹⁷³

6.5.5. *Conclusion – Commitments*

349. Taking those matters into account, it may be considered that the commitments, as set out in the amended set of remedies submitted on 3 December 2008 would remove the significant impediment to effective competition in the EEA market for solid technical grade benzoic acid market.

7. CONDITIONS AND OBLIGATIONS

350. Pursuant to the second subparagraph of Article 8(2) of the Merger Regulation, the Commission "may attach to its decision conditions and obligations intended to ensure that the undertakings concerned comply with the commitments they have entered into vis-à-vis the Commission with a view to rendering the concentration compatible with the common market".
351. The fulfilment of the measure that gives rise to the structural change of the market is a condition, whereas the implementing steps which are necessary to achieve this result are generally obligations on the parties. Where a condition is not fulfilled, the Commission's decision declaring the concentration compatible with the common market no longer 'stands'. Where the undertakings concerned commit a breach of an obligation, the Commission may revoke the clearance decision in accordance with Article 8(6) of the Merger Regulation. The undertakings concerned may also be subject to fines and periodic penalty payments under Articles 14(2) and 15(1) of the Merger Regulation.
352. In accordance with the basic distinction described in Recital 350 as regards conditions and obligations, this Decision should be made conditional on the full compliance by the notifying party with the Section B (including Schedules 1 to 4) of the commitments submitted by the notifying party on 3 December 2008 and all other Sections should be obligations within the meaning of Article 8(2) of the Merger Regulation. The full text of the commitments is attached as an Annex to this Decision and forms an integral part thereof.

8. OVERALL CONCLUSION

353. For the reasons outlined above the notified operation should be declared compatible with the common market pursuant to Article 8(2) of the Merger Regulation and with the EEA Agreement pursuant to Article 57 thereof, subject to compliance with the commitments set out in the Annex which is an integral part of this Decision.

173 As explained in Recital 283, large customers for solid benzoic acid obtain prices which are similar to those obtained by customers purchasing liquid benzoic acid.

HAS ADOPTED THIS DECISION:

Article 1

The notified operation whereby Arsenal Capital Partners ('the notifying party') acquires sole control, within the meaning of Article 3(1)(b) of Regulation (EC) No 139/2004, of the undertaking DSM Special Products B.V. is hereby declared compatible with the common market and the EEA Agreement.

Article 2

Article 1 is subject to full compliance by the notifying party with the conditions set out in Section B (including Schedules 1 to 4) of the final version of the Commitments submitted by the notifying party to the Commission on 3 December 2008. Those commitments are set out in the Annex attached to this Decision.

Article 3

Article 1 is subject to full compliance by the notifying party with the obligations set out in Sections A, C, D and E of the final version of the commitments submitted by the notifying party to the Commission on 3 December 2008. Those commitments are set out in the Annex attached to this Decision.

This Decision is addressed to:

ARSENAL CAPITAL PARTNERS

320 Park Avenue
30th Floor
New York
NY 10022
USA

Done at Brussels, 09/01/2009

For the Commission
(signed)
Neelie KROES
Member of the Commission

TABLE

I.	INTRODUCTION	2
II.	THE PARTIES AND THE OPERATION	2
III.	COMMUNITY DIMENSION	3
IV.	RELEVANT MARKETS	3
IV.A.	BENZOIC ACID	4
IV.A.1.	Product market	5
IV.A.2.	Geographic market – solid benzoic acid	7
IV.A.2.1.	<i>Limited imports from China and the US</i>	8
IV.A.2.2.	<i>Pricing analysis</i>	17
IV.A.2.3.	<i>Conclusion - geographic market</i>	19
IV.A.3.	Geographic market – liquid benzoic acid	19
IV.B.	SODIUM BENZOATE	19
IV.B.1.	Product market	19
IV.B.1.1.	<i>Benzoates</i>	21
IV.B.1.2.	<i>Sorbates</i>	21
IV.B.1.3.	<i>Conclusion - product market</i>	23
IV.B.2.	Geographic market	23
IV.B.2.1.	<i>Imports from the US and China</i>	24
IV.B.2.2.	<i>Transport costs and customs tariffs</i>	24
IV.B.2.3.	<i>Quality and delivery considerations</i>	26
IV.B.2.4.	<i>Pricing analysis</i>	27
IV.B.2.5.	<i>Conclusion - geographic market</i>	28
IV.C.	BENZOATE PLASTICIZERS	28
IV.C.1.	Product market	29
IV.C.1.1.	<i>Technical substitutability</i>	30
IV.C.1.2.	<i>Impact of regulation on substitutability</i>	32
IV.C.1.3.	<i>Conclusion – product market di-benzoate plasticizers</i>	36
IV.C.2.	Geographic market	37
V.	MARKET CONDITIONS	38
V.A.	BENZOIC ACID	38
V.A.1.	Competitors – market shares	38
V.A.2.	Production capacities	40

V.A.3. Customers	41
V.B. SODIUM BENZOATE.....	41
V.B.1. Competitors - market shares	41
V.B.2. Production capacities	43
V.B.3. Customers	43
V.C. BENZOATE PLASTICISERS	44
V.C.1. Competitors.....	44
V.C.2. Customers	45
V.C.3. Entry.....	46
VI. COMPATIBILITY WITH THE COMMON MARKET & EEA AGREEMENT	46
VI.A. BENZOIC ACID – UNILATERAL EFFECTS.....	46
VI.A.1. High combined market share	47
VI.A.2. Close competitors.....	48
VI.A.3. Limited possibilities of switching suppliers	50
VI.A.4. Significant barriers to entry	51
VI.A.5. Spare capacity	54
VI.A.6. Countervailing buyer power	57
VI.A.7. Entry unlikely to occur.....	58
VI.A.8. Efficiency defence	59
VI.A.9. Conclusion	60
VI.B. SODIUM BENZOATE - UNILATERAL EFFECTS.....	60
VI.B.1. The role of Chinese imports.....	61
VI.B.2. Spare capacity of competitors.....	61
VI.B.3. Conclusion	62
VI.C. SODIUM BENZOATE - COORDINATED EFFECTS.....	62
VI.D. BENZOATE PLASTICISERS - VERTICAL EFFECTS	64
VI.D.1. Ability	64
VI.D.1.1. <i>Existence of a significant degree of market power on upstream market</i>	65
VI.D.1.2. <i>Importance of the input</i>	65
VI.D.1.3. <i>Existence of timely and effective counter-strategies</i>	65
VI.D.1.4. <i>Customer contracts</i>	66
VI.D.2. Ability - conclusion.....	67
VI.D.3. Incentive.....	67
VI.D.3.1. <i>Upstream and downstream profits</i>	68

VI.D.3.2. <i>Lack of incentive to foreclose mono-benzoate plasticizer producers</i>	68
VI.D.3.3. <i>Lack of incentive to foreclose Caffaro</i>	69
VI.D.3.4. <i>Lack of incentive to foreclose Ferro</i>	70
VI.D.3.5. <i>Incentive - conclusion</i>	70
VI.D.4. <i>Impact in downstream market</i>	71
VI.D.5. <i>Conclusion</i>	71
VI.E. REMEDIES	71
VI.E.1. <i>Description of the initial set of remedies</i>	71
VI.E.2. <i>Assessment of the initial set of remedies</i>	72
VI.E.3. <i>Description of the second set of remedies</i>	77
VI.E.4. <i>Assessment of the second set remedies</i>	78
VI.E.5. <i>Conclusion - Commitments</i>	79
VII. CONDITIONS AND OBLIGATIONS	79
VIII.OVERALL CONCLUSION	79

European Commission – Merger Task Force

DG Competition

Rue Joseph II 70 Jozef-II straat

B-1000 BRUSSELS

Case M.5153 – ARSENAL/DSP - COMMITMENTS TO THE EUROPEAN COMMISSION

Pursuant to Article 8(2) of Council Regulation (EC) No. 139/2004 as amended (the “*Merger Regulation*”), Arsenal Capital Partners Inc. (“*Arsenal Capital Partners*”) hereby provides the following Commitments (the “*Commitments*”) in order to enable the European Commission (the “*Commission*”) to declare the acquisition by Arsenal Capital Partners of DSM Special Products B.V. (“*DSP*”) compatible with the common market and the EEA Agreement by its decision pursuant to Article 8(2) of the Merger Regulation (the “*Decision*”).

The Commitments shall take effect upon the date of adoption of the Decision.

This text shall be interpreted in the light of the Decision to the extent that the Commitments are attached as conditions and obligations, in the general framework of Community law, in particular in the light of the Merger Regulation, and by reference to the Commission Notice on remedies acceptable under Council Regulation (EC) No 139/2004 as amended and under Commission Regulation (EC) No 802/2004 as amended.

Section A. Definitions

For the purpose of the Commitments, the following terms shall have the following meaning:

Affiliated Undertakings: undertakings controlled by Arsenal Capital Partners and/or by the ultimate parent of Arsenal Capital Partners whereby the notion of control shall be interpreted pursuant to Article 3 Merger Regulation and in the light of the Commission Consolidated Jurisdictional Notice under Council Regulation (EC) No 139/2004.

Arsenal Capital Partners: Arsenal Capital Partners, Inc. of 320 Park Avenue, 30th Floor, New York, NY, USA 10022.

Closing: the transfer of the legal title of the Divestment Business to the Purchaser.

Completion of the Proposed Transaction: the date on which Arsenal Capital Partners completes its acquisition of DSP or 31 January 2009, whichever is the earlier.

Divestment Business: the business or businesses as defined in Section B and Schedule 1 that Arsenal Capital Partners commits to divest as a package.

Divestiture Trustee: one or more natural or legal person(s), independent from Arsenal Capital Partners, who is approved by the Commission and appointed by Arsenal Capital Partners and who has

received from Arsenal Capital Partners the exclusive Trustee Mandate to sell the Divestment Business to a purchaser at no minimum price.

Effective Date: the date of adoption of the Decision.

First Divestiture Period: the period of [...] from Completion of the Proposed Transaction.

Hold Separate Manager: the person appointed by Arsenal Capital Partners for the Divestment Business to manage the day-to-day business under the supervision of the Monitoring Trustee.

Key Personnel: all personnel necessary to maintain the viability and competitiveness of the Divestment Business, as listed in Schedule 3.

Monitoring Trustee: one or more natural or legal person(s), independent from Arsenal Capital Partners, who is approved by the Commission and appointed by Arsenal Capital Partners, and who has the duty to monitor Arsenal Capital Partners' compliance with the conditions and obligations attached to the Decision.

Personnel: all personnel currently employed by or in the Divestment Business, including Key Personnel, staff seconded to the Divestment Business, shared personnel and the additional personnel listed in Schedule 3 (but excluding the personnel noted as belonging solely to the retained benzoate plasticiser business of Velsicol).

Purchaser: the entity approved by the Commission as acquirer of the Divestment Business in accordance with the criteria set out in Section D.

Transaction: the proposed acquisition of DSP by Arsenal Capital Partners.

Trustee(s): the Monitoring Trustee and the Divestiture Trustee.

Trustee Divestiture Period: if no binding sale and purchase agreement has been concluded within the First Divestiture Period, the period of three (3) months from the end of the First Divestiture Period, although if any requisite approvals pursuant to Section D (or similar corresponding legislation in other jurisdictions) have been withheld by the Commission (or any other relevant competition authority), the later of:

- (i) the period of three (3) months from the end of the First Divestiture Period; or
- (ii) the period of three (3) months from the latest date on which any relevant competition authority indicates that it is withholding any approval pursuant to Section D (or similar corresponding legislation).

Velsicol: Velsicol Chemical Corporation of 10400 W. Higgins Road Suite 600, Rosemont, Illinois, USA 60018-3713, a controlled investee company of Arsenal Capital Partners.

Section B. The Divestment Business

Commitment to divest

1. In order to restore effective competition, Arsenal Capital Partners commits to divest, or procure the divestiture of the Divestment Business by the end of the Trustee Divestiture Period as a going concern to a purchaser and on terms of sale approved by the Commission in accordance with the procedure described in paragraph 14. To carry out the divestiture, Arsenal Capital Partners commits to find a purchaser and to enter into a final binding sale and purchase agreement for the sale of the Divestment Business within the First Divestiture Period. If Arsenal Capital Partners has not entered into such an agreement at the end of the First Divestiture Period, Arsenal Capital Partners shall grant the Divestiture Trustee an exclusive mandate to sell the Divestment Business in accordance with the procedure described in paragraph 23 in the Trustee Divestiture Period.

2. Arsenal Capital Partners shall be deemed to have complied with this commitment if, by the end of the Trustee Divestiture Period, Arsenal Capital Partners has entered into a final binding sale and purchase agreement, if the Commission approves the purchaser and the terms in accordance with the procedure described in paragraph 14 and if the closing of the sale of the Divestment Business takes place within a period not exceeding three (3) months after the approval of the purchaser and the terms of sale by the Commission.

3. In order to maintain the structural effect of the Commitments, Velsicol and, if it continues to control Velsicol, Arsenal Capital Partners, shall, for a period of ten (10) years after the Effective Date, not acquire direct or indirect influence over the whole or part of the Divestment Business, unless the Commission has previously found that the structure of the market has changed to such an extent that the absence of influence over the Divestment Business is no longer necessary to render the proposed concentration compatible with the common market.

Structure and definition of the Divestment Business

4. The Divestment Business consists of the following businesses and assets of Velsicol: its liquid technical grade benzoic acid assets and activities located in Estonia; its world-wide solid technical grade benzoic acid business operated in Estonia; and its world-wide sodium benzoate business operated in Estonia. The present legal and functional structure of these businesses and assets as operated to date is described in Schedule 1. The Divestment Business is described in more detail in Schedule 1.

Section C. Related commitments

Preservation of Viability, Marketability and Competitiveness

5. From Completion of the Proposed Transaction until Closing, Arsenal Capital Partners shall preserve the economic viability, marketability and competitiveness of the Divestment Business, in accordance with good business practice, and shall minimise as far as possible any risk of loss of competitive potential of the Divestment Business. In particular Arsenal Capital Partners undertakes:

(a) not to carry out any act upon its own authority that might have a significant adverse impact on the value, management or competitiveness of the Divestment Business or that might alter the nature and scope of activity, or the industrial or commercial strategy or the investment policy of the Divestment Business;

(b) to make available sufficient resources for the development of the Divestment Business, on the basis and continuation of the existing business plans;

(c) to take all reasonable steps, including appropriate incentive schemes (based on industry practice), to encourage all Key Personnel to remain with the Divestment Business.

Hold-separate obligations

6. Arsenal Capital Partners commits, from Completion of the Proposed Transaction until Closing, to keep the Divestment Business separate from the businesses it is retaining and to ensure that Key Personnel of the Divestment Business – including the Hold Separate Manager – have no involvement in any business retained and vice versa. Arsenal Capital Partners shall also ensure that the Personnel do not report to any individual outside the Divestment Business.

7. Until Closing, Arsenal Capital Partners shall assist the Monitoring Trustee in ensuring that the Divestment Business is managed as a distinct and saleable entity separate from the businesses retained by Arsenal Capital Partners. Arsenal Capital Partners shall appoint a Hold Separate Manager who shall be responsible for the management of the Divestment Business, under the supervision of the Monitoring Trustee. The Hold Separate Manager shall manage the Divestment Business independently and in the best interest of the business with a view to ensuring its continued economic viability, marketability and competitiveness and its independence from the businesses retained by Arsenal Capital Partners.

Ring-fencing

8. Arsenal Capital Partners shall implement all necessary measures to ensure that it does not after Completion of the Proposed Transaction obtain any business secrets, know-how, commercial information, or any other information of a confidential or proprietary nature relating to the Divestment Business. In particular, the participation of the Divestment Business in a central information technology network shall be severed to the extent possible, without compromising the viability of the Divestment Business. Arsenal Capital Partners may obtain information relating to the Divestment Business which is reasonably necessary for the divestiture of the Divestment Business or whose disclosure to Arsenal Capital Partners is required by law.

8A. Velsicol shall until Closing have the right to continue to use, on the same basis as it does at the Effective Date, liquid technical grade benzoic acid from the Velsicol liquid technical grade benzoic acid plant for the purpose of production of benzoate plasticisers by Velsicol and paragraphs 6, 7 and 8 above shall not affect this right.

Non-solicitation clause

9. Arsenal Capital Partners undertakes, subject to customary limitations, not to solicit, and to procure that Affiliated Undertakings do not solicit, the Key Personnel transferred with the Divestment Business for a period of two years after Closing.

Due Diligence

10. In order to enable potential purchasers to carry out a reasonable due diligence of the Divestment Business, Arsenal Capital Partners shall, subject to customary confidentiality assurances and dependent on the stage of the divestiture process:

(a) provide to potential purchasers sufficient information as regards the Divestment Business;

(b) provide to potential purchasers sufficient information relating to the Personnel and allow them reasonable access to the Personnel.

Reporting

11. Arsenal Capital Partners shall submit written reports in English on potential purchasers of the Divestment Business and developments in the negotiations with such potential purchasers to the Commission and the Monitoring Trustee no later than 10 days after the end of every month following Completion of the Proposed Transaction (or otherwise at the Commission's request).

12. Arsenal Capital Partners shall inform the Commission and the Monitoring Trustee on the preparation of the data room documentation and the due diligence procedure and shall submit a copy of an information memorandum to the Commission and the Monitoring Trustee before sending the memorandum out to potential purchasers.

Section D. The Purchaser

13. In order to ensure the immediate restoration of effective competition, the Purchaser, in order to be approved by the Commission, must:

(a) be independent of and unconnected to Arsenal Capital Partners;

(b) have the financial resources, proven expertise and incentive to maintain and develop the Divestment Business as a viable and active competitive force in competition with Arsenal Capital Partners and other competitors;

(c) neither be likely to create, in the light of the information available to the Commission, *prima facie* competition concerns nor give rise to a risk that the implementation of the Commitments will be delayed, and must, in particular, reasonably be expected to obtain all necessary approvals from the relevant regulatory authorities for the acquisition of the Divestment Business (the before-mentioned

criteria for the purchaser hereafter the “*Purchaser Requirements*”).

14. The final binding sale and purchase agreement and related agreements (see Schedule 1) shall be conditional on the Commission’s approval. When Arsenal Capital Partners has reached an agreement with a purchaser, it shall submit a fully documented and reasoned proposal, including a copy of the final agreement(s), to the Commission and the Monitoring Trustee. Arsenal Capital Partners must be able to demonstrate to the Commission that the purchaser meets the Purchaser Requirements and that the Divestment Business is being sold in a manner consistent with the Commitments. For the approval, the Commission shall verify that the purchaser fulfils the Purchaser Requirements and that the Divestment Business is being sold in a manner consistent with the Commitments. The Commission may approve the sale of the Divestment Business without one or more assets or parts of the Personnel, if this does not affect the viability and competitiveness of the Divestment Business after the sale, taking account of the proposed purchaser.

Section E. Trustee

I. Appointment Procedure

15. Arsenal Capital Partners shall appoint a Monitoring Trustee to carry out the functions specified in the Commitments for a Monitoring Trustee. If Arsenal Capital Partners has not entered into a binding sales and purchase agreement one month before the end of the First Divestiture Period or if the Commission has rejected a purchaser proposed by Arsenal Capital Partners at that time or thereafter, Arsenal Capital Partners shall appoint a Divestiture Trustee to carry out the functions specified in the Commitments for a Divestiture Trustee. The appointment of the Divestiture Trustee shall take effect upon the commencement of the Trustee Divestiture Period.

16. The Trustee shall be independent of Arsenal Capital Partners, possess the necessary qualifications to carry out its mandate, for example as an investment bank or consultant or auditor, and shall neither have nor become exposed to a conflict of interest. The Trustee shall be remunerated by Arsenal Capital Partners in a way that does not impede the independent and effective fulfilment of its mandate. In particular, where the remuneration package of a Divestiture Trustee includes a success

premium linked to the final sale value of the Divestment Business, the fee shall also be linked to a divestiture within the Trustee Divestiture Period.

Proposal

17. No later than one week after Completion of the Proposed Transaction, Arsenal Capital Partners shall submit a list of one or more persons whom Arsenal Capital Partners proposes to appoint as the Monitoring Trustee to the Commission for approval. No later than one month before the end of the First Divestiture Period, Arsenal Capital Partners shall submit a list of one or more persons whom Arsenal Capital Partners proposes to appoint as Divestiture Trustee to the Commission for approval. The proposal shall contain sufficient information for the Commission to verify that the proposed Trustee fulfils the requirements set out in paragraph 16 and shall include:

- (a) the full terms of the proposed mandate, which shall include all provisions necessary to enable the Trustee to fulfil its duties under these Commitments;
- (b) the outline of a work plan which describes how the Trustee intends to carry out its assigned tasks;
- (c) an indication whether the proposed Trustee is to act as both Monitoring Trustee and Divestiture Trustee or whether different trustees are proposed for the two functions.

Approval or rejection by the Commission

18. The Commission shall have the discretion to approve or reject the proposed Trustee(s) and to approve the proposed mandate subject to any modifications it deems necessary for the Trustee to fulfil its obligations. If only one name is approved, Arsenal Capital Partners shall appoint or cause to be appointed, the individual or institution concerned as Trustee, in accordance with the mandate approved by the Commission. If more than one name is approved, Arsenal Capital Partners shall be free to choose the Trustee to be appointed from among the names approved. The Trustee shall be appointed within one week of the Commission's approval, in accordance with the mandate approved by the Commission.

New proposal

19. If all the proposed Trustees are rejected, Arsenal Capital Partners shall submit the names of at least two more individuals or institutions within one week of being informed of the rejection, in accordance with the requirements and the procedure set out in paragraphs 15 and 18.

Trustee nominated by the Commission

20. If all further proposed Trustees are rejected by the Commission, the Commission shall nominate a Trustee, whom Arsenal Capital Partners shall appoint, or cause to be appointed, in accordance with a trustee mandate approved by the Commission.

II. Functions of the Trustee

21. The Trustee shall assume its specified duties in order to ensure compliance with the Commitments. The Commission may, on its own initiative or at the request of the Trustee or Arsenal Capital Partners, give any orders or instructions to the Trustee in order to ensure compliance with the conditions and obligations attached to the Decision.

Duties and obligations of the Monitoring Trustee

22. The Monitoring Trustee shall:

(i) propose in its first report to the Commission a detailed work plan describing how it intends to monitor compliance with the obligations and conditions attached to the Decision;

(ii) oversee the on-going management of the Divestment Business with a view to ensuring its continued economic viability, marketability and competitiveness and monitor compliance by Arsenal Capital Partners with the conditions and obligations attached to the Decision. To that end the Monitoring Trustee shall:

(a) monitor the preservation of the economic viability, marketability and competitiveness of the Divestment Business, and the keeping separate of the Divestment Business from the business retained by Arsenal Capital Partners, in accordance with paragraphs 5, 6 and 8A of the Commitments;

(b) supervise the management of the Divestment Business as a distinct and saleable entity, in accordance with paragraphs 7 and 8A of the Commitments;

(c) (i) in consultation with Arsenal Capital Partners (but without prejudice to paragraph 8A above), determine all necessary measures to ensure that Arsenal Capital Partners does not after Completion of the Proposed Transaction obtain any business secrets, know how, commercial information, or any other information of a confidential or proprietary nature relating to the Divestment Business, in particular strive for the severing of the Divestment Business' participation in a central information technology network to the extent possible, without compromising the viability of the Divestment Business, and (ii) decide whether such information may be disclosed to Arsenal Capital Partners as the disclosure is reasonably necessary to allow Arsenal Capital Partners to carry out the divestiture or as the disclosure is required by law;

(d) monitor the splitting of assets and the allocation of Personnel between the Divestment Business and Arsenal Capital Partners or Affiliated Undertakings or Velsicol;

(iii) assume the other functions assigned to the Monitoring Trustee under the conditions and obligations attached to the Decision;

(iv) propose to Arsenal Capital Partners such measures as the Monitoring Trustee considers necessary to ensure Arsenal Capital Partners' compliance with the conditions and obligations attached to the Decision, in particular the maintenance of the full economic viability, marketability or competitiveness of the Divestment Business, the holding separate of the Divestment Business and the non-disclosure of competitively sensitive information;

(v) review and assess potential purchasers as well as the progress of the divestiture process and verify that, dependent on the stage of the divestiture process, (a) potential purchasers receive sufficient information relating to the Divestment Business and the Personnel in particular by reviewing, if available, the data room documentation, the information memorandum and the due diligence process, and (b) potential purchasers are granted reasonable access to the Personnel;

(vi) provide to the Commission, sending Arsenal Capital Partners a non-confidential copy at the same time, a written report within 15 days after the end of every month. The report shall cover the operation and management of the Divestment Business so that the Commission can assess whether the business is held in a manner consistent with the Commitments and the progress of the divestiture process as well as potential purchasers. In addition to these reports, the Monitoring Trustee shall promptly report in writing to the Commission, sending Arsenal Capital Partners a non-confidential copy at the same time, if it concludes on reasonable grounds that Arsenal Capital Partners is failing to comply with these Commitments;

(vii) within one week after receipt of the documented proposal referred to in paragraph 14, submit to the Commission a reasoned opinion as to the suitability and independence of the proposed purchaser and the viability of the Divestment Business after the sale and as to whether the Divestment Business is sold in a manner consistent with the conditions and obligations attached to the Decision, in particular, if relevant, whether the sale of the Divestment Business without one or more assets or not all of the Personnel affects the viability of the Divestment Business after the sale, taking account of the proposed purchaser.

22A. Once the final binding sale and purchase agreement in relation to the Divestment Business has been entered into, any disputes in relation to the sale and purchase agreement and related documents which cannot be settled by mutual agreement by Arsenal Capital Partners and/or Velsicol and the Purchaser will be referred to the Monitoring Trustee for binding arbitration. All costs incurred in relation to such arbitration will be shared equally. This provision will cease to apply three months after closing of the sale of the Divestment Business.

Duties and obligations of the Divestiture Trustee

23. Within the Trustee Divestiture Period, the Divestiture Trustee shall sell at no minimum price the Divestment Business to a purchaser, provided that the Commission has approved both the purchaser and the final binding sale and purchase agreement in accordance with the procedure laid down in paragraph 15. The Divestiture Trustee shall include in the sale and purchase agreement such terms and conditions as it considers appropriate for an expedient sale in the Trustee Divestiture Period. In particular, the Divestiture Trustee may include in the sale and purchase agreement such customary representations and warranties and indemnities as are reasonably required to effect the sale. The Divestiture Trustee shall protect the legitimate financial interests of Arsenal Capital Partners, subject to Arsenal Capital Partners' unconditional obligation to divest at no minimum price in the Trustee Divestiture Period.

24. In the Trustee Divestiture Period (or otherwise at the Commission's request), the Divestiture Trustee shall provide the Commission with a comprehensive monthly report written in English on the progress of the divestiture process. Such reports shall be submitted within 15 days after the end of every month with a simultaneous copy to the Monitoring Trustee and a non-confidential copy to Arsenal Capital Partners.

III. Duties and obligations

25. Arsenal Capital Partners shall provide and shall cause its advisors to provide the Trustee with all such cooperation, assistance and information as the Trustee may reasonably require to perform its tasks. The Trustee shall have full and complete access to any of Arsenal Capital Partners or the Divestment Business' books, records, documents, management or other personnel, facilities, sites and technical information necessary for fulfilling its duties under the Commitments and Arsenal Capital Partners and the Divestment Business shall provide the Trustee upon request with copies of any document. Arsenal Capital Partners and the Divestment Business shall make available to the Trustee

one or more offices on their premises and shall be available for meetings in order to provide the Trustee with all information necessary for the performance of its tasks.

26. Arsenal Capital Partners shall provide the Monitoring Trustee with all managerial and administrative support that it may reasonably request on behalf of the management of the Divestment Business. This shall include all administrative support functions relating to the Divestment Business which are currently carried out at headquarters level. Arsenal Capital Partners shall provide and shall cause its advisors to provide the Monitoring Trustee, on request, with the information submitted to potential purchasers, in particular give the Monitoring Trustee access to the data room documentation and all other information granted to potential purchasers in the due diligence procedure. Arsenal Capital Partners shall inform the Monitoring Trustee on possible purchasers, submit a list of potential purchasers, and keep the Monitoring Trustee informed of all developments in the divestiture process.

27. Arsenal Capital Partners shall grant or procure Affiliated Undertakings to grant comprehensive powers of attorney, duly executed, to the Divestiture Trustee to effect the sale, the Closing and all actions and declarations which the Divestiture Trustee considers necessary or appropriate to achieve the sale and the Closing, including the appointment of advisors to assist with the sale process. Upon request of the Divestiture Trustee, Arsenal Capital Partners shall cause the documents required for effecting the sale and the Closing to be duly executed.

28. Arsenal Capital Partners shall indemnify the Trustee and its employees and agents (each an "*Indemnified Party*") and hold each Indemnified Party harmless against, and hereby agrees that an Indemnified Party shall have no liability to Arsenal Capital Partners for any liabilities arising out of the performance of the Trustee's duties under the Commitments, except to the extent that such liabilities result from the wilful default, recklessness, gross negligence or bad faith of the Trustee, its employees, agents or advisors.

29. At the expense of Arsenal Capital Partners, the Trustee may appoint advisors (in particular for corporate finance or legal advice), subject to Arsenal Capital Partners' approval (this approval not to be unreasonably withheld or delayed) if the Trustee considers the appointment of such advisors necessary or appropriate for the performance of its duties and obligations under the Mandate, provided that any fees and other expenses incurred by the Trustee are reasonable. Should Arsenal Capital Partners refuse to approve the advisors proposed by the Trustee the Commission may approve the appointment of such advisors instead, after having heard Arsenal Capital Partners. Only the Trustee shall be entitled to issue instructions to the advisors. Paragraph 28 shall apply mutatis mutandis. In the Trustee Divestiture Period, the Divestiture Trustee may use advisors who served Arsenal Capital Partners during the First Divestiture Period if the Divestiture Trustee considers this in the best interest of an expedient sale.

IV. Replacement, discharge and reappointment of the Trustee

30. If the Trustee ceases to perform its functions under the Commitments or for any other good cause, including the exposure of the Trustee to a conflict of interest:

(a) the Commission may, after hearing the Trustee, require Arsenal Capital Partners to replace the Trustee; or

(b) Arsenal Capital Partners, with the prior approval of the Commission, may replace the Trustee.

31. If the Trustee is removed according to paragraph 30, the Trustee may be required to continue in its function until a new Trustee is in place to whom the Trustee has effected a full hand over of all relevant information. The new Trustee shall be appointed in accordance with the procedure referred to in paragraphs 15-20.

32. Beside the removal according to paragraph 30, the Trustee shall cease to act as Trustee only after the Commission has discharged it from its duties after all the Commitments with which the Trustee has been entrusted have been implemented. However, the Commission may at any time require the reappointment of the Monitoring Trustee if it subsequently appears that the relevant remedies might not have been fully and properly implemented.

Section F. The Review Clause

33. The Commission may, where appropriate, in response to a request from Arsenal Capital Partners showing good cause and accompanied by a report from the Monitoring Trustee:

(i) Grant an extension of the time periods foreseen in the Commitments, or

(ii) Waive, modify or substitute, in exceptional circumstances, one or more of the undertakings in these Commitments.

Where Arsenal Capital Partners seeks an extension of a time period, it shall submit a request to the Commission no later than one month before the expiry of that period, showing good cause. Only in exceptional circumstances shall Arsenal Capital Partners be entitled to request an extension within the last month of any period.

34. Arsenal Capital Partners will no longer be bound by the terms of these Commitments in the event its proposed acquisition of DSM Special Products B.V. is abandoned in the sense of Article 6(1)(c) of the Merger Regulation.

.....

duly authorised for and on behalf of Arsenal Capital Partners Inc.

.....

name

.....

position

.....

date

SCHEDULE 1

1. The Divestment Business is currently owned and operated by Velsicol. The businesses and assets to be divested are based in Kohtla-Järve in Estonia. The Divestment Business is Velsicol's liquid technical grade benzoic acid assets and activities located in Estonia, its world-wide solid technical grade benzoic acid business and its world-wide sodium benzoate business. The Divestment Business is a collection of assets and is not incorporated separately (save as described below). Annotated pictures of the layout of the plant complex are attached at Schedule 2.

2. The Divestment Business includes, but is not limited to:

Liquid technical grade benzoic acid assets and activities

- (b) the toluene storage tank;
- (c) in process toluene storage;
- (d) the toluene pump house;
- (e) air compressors;
- (f) two distillation columns;
- (g) the utility plant associated with the liquid technical grade benzoic acid facility;
- (h) a long lease (equivalent to a freehold) of relevant land and buildings relating to the liquid technical grade benzoic acid activity, and such additional land which may be reasonably foreseen at the time of sale as being required for expansion;
- (i) all necessary liquid technical grade benzoic acid production know-how will be licensed royalty free on a non-exclusive basis to the Divestment Business (there are no patents or other registered intellectual property rights such as trade marks/logos). The production licence relating to liquid BA will permit any development or expansion at the Estonian site. If the Divestment Business is sold to an existing manufacturer of liquid benzoic acid, then this licensed know-how will be for use exclusively at the Estonia site (including in relation to developments or expansion at that site);
- (j) copies of all process descriptions, technical manuals, product specifications, validation documentation, quality control standards and regulatory records relating to Velsicol's production of liquid technical grade benzoic acid;
- (k) reasonable endeavours to transfer relevant Personnel (being those of the Personnel engaged in the liquid technical grade benzoic acid operations of Velsicol, including

quality control and the production support functions (see further Schedule 3 for details of the staff to be transferred));

- (l) a legal entity, being an entity with no activities or assets, to which subject to any necessary third party consents all existing contracts relating to the supply of materials used to manufacture liquid technical grade benzoic acid will be novated;
- (m) all necessary assistance in securing a separate environmental permit for the liquid technical grade benzoic acid activity;
- (n) the waste water treatment assets. Velsicol will pay a share of the current operating cost of the water treatment plant, with its share being based on its share of the waste water treated by this plant (this will be covered under the supply agreement, see further below). The liquid technical grade benzoic acid activities will also incur any environmental costs/liabilities associated with the production of liquid technical grade benzoic acid (including the processing of liquid technical grade benzoic acid into solid benzoic acid, sodium benzoate or benzoate plasticisers) and any such costs/liabilities will be allocated to the Divestment Business and Velsicol's retained benzoate plasticiser business according to the extent that these businesses lead to such costs/liabilities being incurred;
- (o) the Divestment Business will enter into an evergreen supply agreement with Velsicol's retained benzoate plasticiser business under which:
 - (i) the Divestment Business will make available to Velsicol for purchase 19ktpa of liquid technical grade benzoic acid;
 - (ii) Velsicol will have the right but not the obligation to purchase and receive from the Divestment Business up to 19 ktpa of liquid technical grade benzoic acid;
 - (iii) the price of liquid BA under the supply agreement would cover all current costs (toluene, steam, waste water treatment (based on the proportion of such costs attributable to the plasticisers business, as outlined above)) and various other operating costs (such as labour), and that the profit margin agreed would also cover all of current depreciation (with such depreciation charges funding maintenance and replacement capital expenditure);
 - (iv) the structure of the pricing formula would be a price per tonne of liquid BA based on:
 - (A) published indices of toluene prices (the main raw material). Velsicol will have the option of procuring some or all of its toluene separately, and Velsicol will only pay the Divestment Business for the toluene which the Divestment Business procures to meet Velsicol's liquid BA requirements;
 - (B) current natural steam costs (indexed by reference to natural gas costs as a benchmark of trends in steam costs);
 - (C) Velsicol's share of waste water treatment costs; and
 - (D) a fixed sum to cover other operating costs and to provide a margin;

- (v) the Divestment Business will have obligations to supply specified volumes to a defined delivery schedule and to maintain existing quality standards ;
 - (vi) Velsicol will have the right to request an increase in the capacity of the liquid technical grade benzoic acid plant either solely or jointly with the Divestment Business, and this shall be financed *pro rata* to each party's share of this additional capacity. All liquid technical grade benzoic acid supplied under these arrangements will be supplied on the same basis as provided for under the supply agreement. However, if the Divestment Business elects not to undertake the increase in capacity, then Velsicol will be entitled to require and undertake the increase at its own cost (including bearing any costs which might consequently be imposed on the Divestment Business) and with the resultant capacity increase being added to the volumes of liquid technical grade benzoic acid Velsicol is supplied. The obligation to bear any costs which might consequently be imposed on the Divestment Business would include the costs which might arise if the liquid technical grade benzoic acid facility were to be closed for a period of time as a consequence of any capacity expansion, and any such costs would be limited to the costs consequently incurred by the Divestment Business and the loss of profit on any foregone sales;
 - (vii) in the event that Arsenal Capital Partners/Velsicol sells the retained benzoate plasticiser business at Estonia, then as part of such sale it/they may assign the benefit of the whole or part of the supply agreement to the purchaser;
- (p) the purchaser of the Divestment Business is not permitted to dispose of, or grant security over, or relinquish operational control of the liquid benzoic assets at the Estonian plant without Arsenal's consent. Such consent will be conditional on Arsenal being satisfied that this will not adversely affect :
- (i) the sufficiency of management and financial resources available to the operator of the liquid benzoic acid assets; or
 - (ii) the competency of the operation of the liquid benzoic acid assets; or
 - (iii) compliance with the Divestment Business' obligations under the supply agreement.

Such consent shall not be unreasonably withheld.

These provisions will also apply to any subsequent owners of the Divestment Business. Subject to the timely provision of any information required to assess the above points, Arsenal will decide whether it will provide its consent within 30 days. Any dispute arising out of or in connection with this provision shall be referred to and finally resolved by arbitration under the Rules of the London Court of International Arbitration.

A list of the key assets included in the Divestment Business is set out at Schedule 4.

Solid technical grade benzoic acid business

- (a) the flaker unit which is used to produce solid technical grade benzoic acid (consisting of three drum flakers and support equipment, plus related spare parts);
- (b) packaging, palletizing and stretch wrapping equipment;
- (c) storage facilities;
- (d) loading facilities;
- (e) a long lease (equivalent to a freehold) of relevant land and buildings relating to the solid technical grade benzoic acid business, and such additional land which may be reasonably foreseen at the time of sale as being required for expansion;
- (f) all know how associated with the operation of the facilities (there are no patents or other intellectual property rights such as trade marks/logos – the solid technical grade benzoic acid product is sold by reference to its technical specification);
- (g) copies of all process descriptions, technical manuals, product specifications, validation documentation, packaging specifications, quality control standards and regulatory records relating to Velsicol's sale and production of solid technical grade benzoic acid;
- (h) reasonable endeavours to transfer relevant Personnel (being those of the Personnel engaged in the solid technical grade benzoic acid operations of Velsicol, including quality control and the production support functions as well as customer sales/service personnel (see further Schedule 3 for details of the staff to be transferred));
- (i) a legal entity, being an entity with no activities or assets, to which subject to any necessary third party consents all relevant customer and supplier contracts will be novated, including:
 - (i) all existing contracts relating to the supply of packaging materials used for packaging solid technical grade benzoic acid;
 - (ii) all existing contracts relating to the supply of haulage services used for transporting solid technical grade benzoic acid to world-wide customers;
 - (iii) all existing contracts world-wide with end users and distributors for the supply of solid technical grade benzoic acid;
- (j) customer lists, and credit and other records relating to all of Velsicol's world-wide end user and distributor customers for solid technical grade benzoic acid;
- (k) copies of existing sales and promotional material used world-wide relating to Velsicol's solid technical grade benzoic acid;
- (l) a non-solicitation clause in relation to the Divestment Business' customers for solid technical grade benzoic acid who are not already customers of DSM Special Products B.V. for one year. In relation to customers which are distributors, this will apply to

each individual subsidiary company of a distributor group separately, unless at the Effective Date an individual subsidiary company of a distributor group is included within joint procurement arrangements of that distributor group which also include a subsidiary which is a customer of DSM Special Products B.V.. In this latter case, the subsidiaries covered by the joint procurement arrangement will be treated as one customer for this purpose;

- (m) all necessary assistance in securing a separate environmental permit for the solid technical grade benzoic acid business.

A list of the key assets included in the Divestment Business is set out at Schedule 4.

Sodium benzoate business

- (a) drying and granulation unit consisting of six drum dryers and three compactors, packaging equipment and related spare parts;
- (b) the packaging line;
- (c) storage facilities;
- (d) loading facilities including forklift trucks (shared with solid technical grade benzoic acid business);
- (e) a long lease (equivalent to a freehold) of relevant land and buildings relating to the sodium benzoate business, and such additional land which may be reasonably foreseen at the time of sale as being required for expansion;
- (f) all know how associated with the operation of the facilities (there are no patents, but Velsicol's trade mark "Probenz" would also be included – although the sodium benzoate product is sold by reference to its technical specification);
- (g) copies of all process descriptions, technical manuals, product specifications, validation documentation, packaging specifications, quality control standards and regulatory records relating to Velsicol's sale and production of sodium benzoate;
- (h) reasonable endeavours to transfer relevant Personnel (being those of the Personnel engaged in the sodium benzoate operations of Velsicol, including manufacturing operations, quality control and the production support functions as well as customer sales/service personnel (see further Schedule 3 for details of the staff to be transferred));
- (i) a legal entity, being an entity with no activities or assets, to which subject to any necessary third party consents all relevant customer and supplier contracts will be novated, including:
 - (i) all existing contracts relating to the supply of sodium hydroxide used to manufacture sodium benzoate;
 - (ii) all existing contracts relating to the supply of packaging materials used for packaging sodium benzoate;

- (iii) all existing contracts relating to the supply of haulage services used for transporting sodium benzoate to world-wide customers;
- (iv) all existing contracts world-wide with end users and distributors for the supply of sodium benzoate;
- (j) customer lists, and credit and other records relating to all of Velsicol's world-wide end user and distributor customers for sodium benzoate;
- (k) copies of existing sales and promotional material used world-wide relating to Velsicol's sodium benzoate;
- (l) a non-solicitation clause in relation to the Divestment Business' customers for sodium benzoate who are not already customers of DSM Special Products B.V. for one year. In relation to customers which are distributors, this will apply to each individual subsidiary company of a distributor group separately, unless at the Effective Date an individual subsidiary company of a distributor group is included within joint procurement arrangements of that distributor group which also include a subsidiary which is a customer of DSM Special Products B.V.. In this latter case, the subsidiaries covered by the joint procurement arrangement will be treated as one customer for this purpose;
- (m) all necessary assistance in securing a separate environmental permit for the sodium benzoate business.

A list of the key assets included in the Divestment Business is set out at Schedule 4.

3. The Divestment Business shall not include the retained assets identified in Schedule 4 and the Personnel identified in Schedule 3 noted as belonging solely to the retained benzoate plasticiser business of Velsicol.

SCHEDULE 3 – list of Personnel including Key Personnel to be divested and retained

Case M 5153 Arsenal-DSP

Offer of Commitments

Schedule 2, Personnel

Personnel

Divested Liquid BA operations

- Key Personnel:
 - Plant Manager
 - Purchasing/Finance/Administrative Manager
 - Operations Manager
 - BA Molten Supervisor
 - Maintenance Manager
 - Technical Manager
 - Quality Manager

Retained Plasticiser Business

- European Supply Chain Director
- Plasticiser Supervisor
- Plasticiser Operators
- Plasticiser Utility Technician
- Plasticiser Customer Service Rep
- Plasticiser Logistics Coordinator
- Business Analyst

3-12-08

Divested BA Solid/Salts Business

- Europe BA/Salts Salesperson } Key
- Supply Chain Manager } Personnel
- Salts Area Supervisor }
- Salts Operators
- Crystallization Operators
- Loaders
- BA/Salts Customer Service Reps
- Order Fulfillment Coordinators

2

Division of Assets (1)

- Liquid BA Assets (Employees)
- Including:

Division of Assets (2)

- Divested BA Solid/Salts Business (... Employees)

3-12-08

5

Division of Assets (3)

- Retained Plasticiser Business (Employees)
- BA Production Technology Know How (licensed to Divestment Business)
- Land (a portion of which leased to Divestment Business)
- DeltaV Control System
- Plasticiser BA Feed Tank E-316.5
- Plasticiser Production Unit No. 1 and Building with related Spare Parts
- Plasticiser Production Unit No. 2 (under construction)
- Glycol Storage Tanks (), Truck loading/unloading system and Buildings
- Plasticiser Storage Tanks (existing, future) and interconnecting pipe racks
- Hot Oil Heater
- Gas Pipeline
- High reach Forklift

3-12-08

6