EN

Case No COMP/M.5785 -
SUN CAPITAL/ DSM
SPECIAL PRODUCTS

Only the English text is available and authentic.

REGULATION (EC) No 139/2004
MERGER PROCEDURE

Article 6(1)(b) NON-OPPOSITION
Date: 02/12/2010

In electronic form on the EUR-Lex website under document number 32010M5785

Office for Publications of the European Union
L-2985 Luxembourg

EUROPEAN COMMISSION

Brussels, 02/12/2010

SG-Greffe(2010) D/19353
C(2010)8820

In the published version of this decision, some information has been omitted pursuant to Article 17(2) of Council Regulation (EC) No 139/2004 concerning non-disclosure of business secrets and other confidential information. The omissions are shown thus […]. Where possible the information omitted has been replaced by ranges of figures or a general description.

PUBLIC VERSION

MERGER PROCEDURE
ARTICLE 6(1)(b) DECISION

To the Notifying party:

Dear Sir/Madam,

Subject: Case No COMP/M.5785 - Sun Capital/ DSM Special Products
Notification of 26th October pursuant to Article 4 of Council Regulation No 139/2004[1]

1. On 26/10/2010 the European Commission received a notification of a proposed concentration pursuant to Article 4 and following a referral pursuant to Article 4(5) of Council Regulation (EC) No 139/2004[2] by which Sun Capital Partners IV, LP ("Sun Capital Partners Fund", USA), belonging to the Sun Capital Partners group, acquires within the meaning of Article 3(1)(b) of the Merger Regulation control of DSM Special Products B.V. ("DSP", the Netherlands) by way of purchase of shares. In addition, Sun Capital Partners Fund will acquire intellectual property rights from DSM IP Assets B.V. ("DSM IP", the Netherlands) by way of purchase of assets. DSP and DSM IP are wholly-owned subsidiaries of the Royal DSM N.V ("Royal DSM").

---

1 OJ L 24, 29.1.2004, p. 1 ("the Merger Regulation"). With effect from 1 December 2009, the Treaty on the Functioning of the European Union ("TFEU") has introduced certain changes, such as the replacement of "Community" by "Union" and "common market" by "internal market". The terminology of the TFEU will be used throughout this decision.

2 OJ L 24, 29.1.2004, p. 1 (the "Merger Regulation").

I. THE PARTIES

2. The Sun Capital Partners Fund forms part of Sun Capital Partners, Inc., a US private equity investment firm ("**Sun Capital**"). One of the portfolio companies indirectly controlled by an affiliate controlled by the Sun Capital Partners Fund is Emerald Performance Materials, LLC ("**Emerald**") which, in turn, has for its wholly owned subsidiary Emerald Kalama Chemicals LLC **("Kalama"**).

3. Kalama is a US based company active in the production of benzoic acid, sodium benzoate, benzyl alcohol and benzaldehyde. Kalama also produces some derivates of some of these chemicals as well as certain other fatty aldehydes (downstream products).

4. The target DSP is part of DSM Netherlands ("DSM") DSM and DSM IP are wholly owned subsidiaries of Royal DSM. DSP produces benzaldehyde, benzoic acid, benzyl alcohol, and sodium benzoate. DSM IP is the owner of certain intellectual property rights.

II. THE OPERATION AND THE CONCENTRATION

5. Sun Capital Partners Fund, through its newly created vehicle "NewCo", intends to acquire all outstanding and issued share capitals of DSP, along with certain intellectual property right assets from DSM IP. The proposed transaction will result in the acquisition of sole control of DSP by Sun Capital Partners Funds and, thus, it constitutes a concentration within the meaning of Article 3 of the Merger Regulation.

III. EU DIMENSION

6. The notified concentration does not meet the turnover thresholds of Article 1(2) or 1(3) of the Merger Regulation.

7. On 09/03/2010, the Commission received from the parties a referral request pursuant to Article 4(5) of the Merger Regulation which was transmitted to all Member States. Since no Member State has expressed its disagreement as regards the request to refer the case to the Commission, the concentration is deemed to have a Community dimension.

IV. RELEVANT MARKET DEFINITIONS

8. The transaction gives rise to horizontal overlaps between the parties' activities with regard to four products, namely for (i) solid technical grade benzoic acid ("BA"), (ii) sodium benzoate ("NaB"), (iii) benzaldehyde ("BALD") and (iv) benzyl alcohol ("BALC"). In addition there are a number of vertical relationships: (i) BA upstream; NaB, potassium benzoate, benzyl benzoate and benzoate plasticizers, downstream and (ii) BALD, upstream; amyl and hexyl cinnamic aldehyde, methyl cinnamic aldehyde and cinnamic aldehyde downstream.

A. Relevant product markets

A.1 Benzoic acid (BA)

9. BA is a shiny white crystalline solid produced by the partial oxidation of toluene. Toluene, the main input of BA, is usually produced as a by-product in the process of making gasoline.

10. BA is used as an input in a range of end-use applications, including as an antimicrobial preservative for food and drinks; animal feed; pharmaceuticals coatings and in personal healthcare and as an input in the manufacture of other chemicals. All BA starts as liquid and all producers of BA necessarily manufacture liquid BA.

11. BA can be segmented according to different degrees of purity: ultra pure BA (purity of 99.98%) which is used for food and pharma applications, BA for animal feed (purity of 99.9%) and technical grade BA (purity of up to 99.85%) which is used as input for other chemicals and products such as NaB, potassium benzoate, calcium benzoate and benzoate plasticizers.

12. DSP produces liquid BA and solid BA at various purity levels. It has only one production site in Rotterdam, while Kalama produces liquid and solid technical grade BA (*i.e*. purity level of 99.5%) exclusively at its plant in the town of Kalama, in the State of Washington, USA.

13. In its previous decision *Arsenal/DSP*[3], the Commission found that the product market for BA could be segmented according to different degrees of purity: (i) ultra pure (purity of 99.98%); (ii) animal feed (purity of 99.9%); and (iii) technical grade (purity of up to 99.85%)[4]. According to the market investigation results, these three markets were characterized by important supply-side and demand-side differences.

14. Starting with supply-side considerations, a special purification process is needed for the production of ultra pure BA, which currently only DSP is capable of achieving[5]. The applicable Community legislation requires 99.9% purity for animal feed BA. Only DSP (and not Kalama) produces BA that meets the EU requirements for use as an additive in animal feed. The European Commission also held that there are also important price differences between the different grades of BA. From a demand-side perspective, because of the differences in levels of purity required depending on the end-use and the higher prices for BA having a higher level of purity, the various types of BA identified are not substitutes for each other.

15. In the same decision, the Commission also concluded that technical grade BA could be further segmented into liquid technical grade BA[6] and solid (flake) technical grade BA,[7] as

---

3 COMP/M.5153-ARSENAL/DSP.

4 COMP/M.5153-ARSENAL/DSP, at paragraph 19.

5 In order to produce its ultra pure BA and it animal feed BA, DSP uses "Sulzer" technology, also known as "melt crystallisation". To the parties' knowledge, DSP is the only producer of BA that uses this technology. However, there is nothing proprietary to DSP with respect to Sulzer technology. This technology is easily available from various manufacturers and commonly used in the purification process of many chemicals.

6 Liquid benzoic acid is an input in the production of solid benzoic acid.

the solid BA requires equipment which is not needed for the production of liquid BA. Additionally, the Commission found that although liquid and solid BA have identical chemical properties, customers for liquid BA do not appear willing to switch to solid BA and vice versa. This is largely because different on-site handling and processing facilities are required for liquid and solid BA. The European Commission considered that customers can either use the liquid BA 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 BA. Such storage facilities would require an investment of between EUR 300 000 and EUR 1 million depending on the volumes[8].

16. In addition, customers of liquid technical grade BA mostly use it for applications such as the production of benzoate plasticizers 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 technical grade BA instead of liquid technical grade BA, they would have to melt the solid technical grade BA before using it for further production processing, incurring considerable costs for the melting facility.

17. Finally, the Commission noticed that liquid technical grade BA is approximately 15% cheaper than solid technical grade BA. This appear still to be the case as DSP's average prices for each of those products were respectively EUR […] per metric tonne for liquid BA and EUR […] per metric tonne for solid BA in 2009.

18. The notifying party agrees with the market definitions of the Commission's earlier decision.

19. The above arguments were largely confirmed by the market investigation. Therefore, it can be concluded from the above that both liquid and solid BA constitute separate relevant product markets.

A.2 Sodium benzoate (NaB)

20. NaB is a sweet and white solid produced by reacting BA with sodium hydroxide to make a water-based solution. The solution created is filtered and treated using a carbon filter to remove impuritites. The salt crystals are then isolated by evaporating the water. The product is then screened using a common filtration process to take out any fine or oversized particles. NaB can be produced using either liquid or solid BA, and the quality or grade of BA used does not materially affect the quality of the NaB produced. The reason is that the production process of NaB allows for the removal of impurities[9]. Around 80% of the variable cost of producing NaB is related to BA.

21. It is used primarily as an antimicrobial preservative in food and soft drinks, but it is also used in other applications such as pharmaceutical products; the automotive industry; personal care;

---

7 Solid technical grade benzoic acid is produced by solidifying liquid technical grade benzoic acid and forming it into flakes.

8 COMP/M.5153-ARSENAL/DSP, at paragraph 31.

9 Filtration is done using a carbon filter, a filtration method commonly used in chemical production.

household cleaning products and pyrotechnics. The parties consider that all manufacturers of NaB produce to pharmaceutical grade (purity level not below 99.0%) and supply all customers, whatever the end-use, at this grade.

22. Both Kalama and DSP produce NaB for all the applications above mentioned. DSP manufactures all its NaB at the purity level of 99.9%, which according to the parties is not required by legislative or industry standards for either the food and beverage industry or pharmaceutical applications. In fact, to the knowledge of the parties, no other manufacturer of NaB achieves the same purity level of DSP's NaB. Kalama manufactures all its NaB at the purity level of 99.0% which it sells at the same price irrespectively of its end-application.

23. The European Commission also considered in the *Arsenal/DSP* decision whether the relevant product market for NaB should include sorbates and other benzoates (*i.e.*, potassium benzoate and calcium benzoate) given that they are close substitutes in similar applications (for example, food and drinks). The Commission found that there were important limitations with respect to demand-side substitutability (significant differences in taste, sensory, anti-microbial and technical properties as well as price) and therefore concluded that NaB was in a separate relevant product market from sorbates. Nonetheless, the Commission did not conclude on the product market definition, but indicated that it appeared more likely that NaB constituted a separate relevant product market from sorbates and other benzoates.

24. Only Kalama produces potassium benzoate and neither Kalama nor DSP manufacture calcium benzoate or sorbates. Moreover, as the value of the market of potassium benzoate (the sales of potassium benzoate in 2009 in the EEA amounted to EUR 0.11 million as opposed to the market for NaB amounting to EUR 23 million) is very limited, the parties' market position would be unchanged either considering the market for NaB only or a wider market encompassing also potassium benzoate.

25. The majority of the respondents to the Commission market investigation signified that NaB is a separate market from sorbates (i.e. sorbic acid, potassium sorbate and calcium sorbate) and that no further subdivision is needed for this market. Two customers, however, considered that the market for NaB should be divided according to the end application. In particular, one believed segmentation by food and pharmaceutical applications should be adopted. The second denoted that the subdivision should be between food/pharmaceutical applications and technical applications.

26. However, as it equally appeared from the market investigation that at least all the main producers of NaB achieve a purity level which is suitable for all its main end-applications as listed at recital 21, there is no need to further segment the market of NaB according to its purity level.

27. Based on the above, for the purpose of the present decision NaB will be considered as a relevant product market.

A.3 Benzaldehyde (BALD)

28. BALD is a colourless liquid, which has a characteristic pleasant almond-like odour. It is an organic compound (C_6H_5CHo) consisting of a benzene ring with a formyl substituent and can be obtained by many processes. BALD can be formed by partial oxidation of benzoic alcohol and regularly oxidized BA and then converted to additional products by hydrocyanic acid or sodium bisulfide. It can also be prepared by oxidation of toluene or benzyl chloride or by treating benzyl chloride with an alkali (*e.g.*, sodium hydroxide). Kalama produces BALD by oxidation of toluene (while co-producing in the same process BA). DSP also produces BALD by oxidation of toluene (but co-produces BA and benzyl alcohol in the process).

29. BALD is commonly employed as a food flavouring agent, as well as in the synthesis of other organic compounds, including pharmaceuticals, agrochemicals and plastic additives. BALD is also used as an intermediate for the processing of perfume and flavouring compounds and in the preparation of certain aniline dyes. The parties state that there is no product that can act as a substitute to BALD.

30. According to the parties, all manufacturers of BALD (with the exception of Kalama) produce BALD at a food and pharma grade level, regardless of the end-use application. Kalama also produces some lower grade BALD for technical applications none of which was sold in the EEA in 2009[10]. DSP does not manufacture a lower grade level BALD.

31. The Commission has never analysed the market for BALD in its previous decisions. The market investigation corroborated the parties' arguments. First, the majority of the respondents underlined that in the different chemical processes and end-products where BALD is used, it is almost impossible to find a suitable substitute, given its specific chemical structural characteristics and its specific organoleptic characteristics. Consequently, BALD has no close substitutes.

32. All the competitors and a majority of the customers responding to the Commission's market investigation considered that there is only one market for BALD despite some observations that chlorine levels were important. However, it appears that the major suppliers of BALD and some of their customers have the ability to adjust the chlorine level so that there does not appear to be any basis for a separation of the market according to the chlorine content.

33. For the purposes of this decision, the Commission considers that the market for BALD constitutes a separate relevant product market.

A.4 Benzyl Alcohol (BALC)

34. BALC is an organic compound ($C_6H_5CH_2OH$), a colourless liquid with a mild pleasant aromatic odour. It is a useful solvent due to its polarity, low toxicity and low vapour

[10] Sales by Kalama of lower grade BALD represent approximately [5-10]% of the total estimated market for BALD. Kalama manufactures its lower grade BALD primarily for sale to customers in Asia (but not in the EEA) who use it to make certain pharmaceuticals (*e.g.*, pseudoephedrine and phenyl-glycene), benzoin (a chemical used in powder coatings), in agro-chemical synthesis and in flavour and fragrance ingredients.

pressure, and it is also partially soluble in water and completely miscible in alcohol and diethyl ether.

35. The most important application for BALC is as a curing agent for epoxy resins. At least [70-80]% of the volume of BALC sold by Kalama and DSP is used for this purpose. Other applications include the photo industry, pharmaceuticals and the use of BALC as a precursor to a variety of esters used in the flavour and fragrance industries.

36. The Commission has not defined the market for BALC in its prior decisions. The notifying party submits that BALC is a separate market, since there is no substitute for BALC and all manufacturers of BALC (with the exception of a limited quantity produced by Kalama)[11] produce and supply BALC at the pharmaceutical grade whatever the end-use application. Further, in consistency with the findings of the Office of Fair Trading in the UK[12], the notifying party argues that there is no need to define a separate product market by grades.

37. The respondents to the market investigation indicated that almost all manufacturers manufacture different grades of BALC, including the pharmaceutical grade. As well, all the competitors who responded to the Commission market investigation regarded the market as encompassing all BALC, as there are no major purity differences between the different grades, and none of them is so specific or different in its production process. In fact, all manufacturers stated that the different grades are produced with the same equipment and production lines.

38. Given the above, and for the purposes of this case, the market for BALC will be considered as a separate relevant market.

Downstream markets

Derivatives of BA

A5. Potassium benzoate

39. Potassium benzoate is the potassium salt of BA; a high quality fine chemical available in solid form only, which is the specifically manufactured for food and beverage use. It is designed to replace NaB in applications where the preserving power of NaB is required, but where low sodium content is desired. Potassium benzoate is used in combination with artificial sweeteners to create a desired taste profile in non-alcoholic flavoured soft drinks. It is also used in low-sugar jams, marmalades and jellies, as well as in alcohol-free beer. The use of

---

11 The non-pharma grade of BALC produced by Kalama represented in the last year minimal total worldwide sales of only approximately […] or approximately […] (the bulk of Kalama's sales for the lower grade BALC - approximately [90-100]% - were to customers in the US, and there were no customers in the EEA). Customers of Kalama which purchase the lower technical grade BALC use it primarily in epoxy resins as a non-reacting curative agent. Those customers can and do buy the higher grade BALC from other suppliers.

12 Proposed acquisition by Tessenderlo Chemie SA of the Widnes Plant and business of Atofina UK Ltd, ME/1276/01.

potassium benzoate in diet soft drinks represents approximately 80% of the total worldwide consumption of potassium benzoate.

40. DSP does not produce potassium benzoate, only Kalama does. Kalama manufactures potassium benzoate at a purity level of 99.0%, which is the level required for food applications[13]. This is the same level of purity for other suppliers in the industry. Further, the parties state that impurities in potassium benzoate during the production process are removed by a simple carbon filtration step.

41. Potassium benzoate has similar end-uses to NaB, however in its previous decision[14] the European Commission found that, in general, potassium benzoate is not used as a substitute for NaB because it is 10% more expensive than the latter and is sold almost exclusively in North America (the demand for potassium benzoate in the EEA is estimated at only 100 metric tons per year). To the knowledge of the Parties, only Kalama currently exports or sells potassium benzoate in the EEA to one customer active in the food industry.

42. Based on the above considerations the notifying party proposes to define a relevant product market for potassium benzoate.

43. Most of the respondents to the Commission market investigation considered potassium benzoate as a separate relevant market. Albeit NaB and potassium benzoate have similar end-applications, the price difference remain to be significant. Also, it appears that switching production from NaB to potassium benzoate, and vice versa, is feasible since both share almost identical production methods and equipment requirements.

44. In any case, there is no need to conclude on whether NaB and potassium benzoate belong to the same product market as no competition concerns would arise under any alternative delineation of the product market.

A6. Benzyl benzoate

45. Benzyl benzoate is a derivative of BA which is produced in liquid form. It has a high molecular weight and, combined with its nearly odourless nature, is suitable as a perfume fixative. In fact, it is used nearly exclusively in fragrance applications (99% of the total production on a worldwide basis). Other applications include pharmaceuticals[15] and plasticisers for cellulose acetate and nitro cellulose, as well as application in confectionaries and chewing gum, and in the manufacture of fine candle products. It can be made in an

---

13 See Directive on food additives, E212, at Annex 38. See, also, Food Chemicals Codex, under "Potassium Benzoate", at Annex 43.

14 COMP/M.5153-ARSENAL/DSP.

15 *i.e.*, for the treatment of scabies and lice.

estirification reaction between BALC and BA with purification via distillation[16] or by the reaction between benzyl chloride and NaB. DSP does not produce benzyl benzoate.

46. There are no Commissions precedents regarding benzyl benzoate. The notifying party submits that there is no substitute for benzyl benzoate and all manufacturers of benzyl benzoate produce it to the same level of purity whether it is used in fragrance or pharmaceutical applications. The market investigation supported the notifying party's argument.

47. Given the above, and for the purposes of this case, the market for benzyl benzoate will be considered as a separate relevant product market.

A7. Benzoate plasticizers

48. Plasticizers are organic esters added to polymers to facilitate processing and to increase flexibility and toughness of the final product by internal modification of the polymer module.

49. Benzoate plasticizers are produced using BA. Plasticizers are organic esters added to polymers to facilitate processing and to increase flexibility and toughness of the final product by internal modification of the polymer molecule. There are several major types of plasticizer (based on their chemistry), including phthalates, aliphatics, epoxidized vegetable oils, trimellitates, benzoates, phosphate plasticizers and polymeric plasticizers. Plasticizers are primarily used in the manufacture of flexible polyvinyl chloride ("PVC"), which accounts for over half of the world plasticizer consumption. In turn, plasticized PVC is used in a wide range of applications including medical tubing, footwear, stationery goods, flooring and wall-coverings, electrical cable insulation, clothing and toys.

50. DSP does not manufacture benzoate plasticizers, whereas Kalama currently manufactures mainly one type of benzoate plasticizers, namely di-benzoate plasticizers. This includes a range of products based upon benzoate esters of di-ethylene and/or di-propylene glycol. It also has a small production of mono-benzoate plasticizers.

51. In its previous decision *Arsenal/DSP*[17], the Commission found that benzoate plasticizers cannot technically be substituted by all other plasticizers but rather only by a limited number of them; butyl benzyl phthalate and di-n-butyl phthalate. Despite this technical substitutability, the Commission concluded that di-benzoate plasticizers constitute a separate product market because the producers of adhesives, caulks and sealants, who account for approximately three-quarters of the EEA market demand for di-benzoate plasticizers, have switched from using phthalate-based plasticisers to di-benzoate plasticizers and are unlikely to switch back.

52. The results of the market investigation confirmed the parties' view, as it appears very difficult to switch back to phthalate-based plasticisers once the switch to di-benzoate plasticizers has been made. However, one respondent believed that di-benzoate plasticizers can be substituted

16 Kalama's production process.

17 COMP/M.5153-ARSENAL/DSP.

by other kinds of benzoate plasticizers in combination with other types of plasticizers such as high molecular weight phthalates. Nevertheless such substitution may require a period of testing and product qualification which can exceed one year, and thus, it involves costs.

53. Given the above, and for the purposes of this case, the market for di-benzoate plasticizers will be considered as a separate relevant product market.

Derivatives of BALD

A8. Amyl cinnamic aldehyde (ACA), Hexyl cinnamic aldehyde (HCA), Methyl Cinnamic aldehyde (MCA), Cinnamic aldehyde (CA)

54. **ACA** is made from the aldol condensation reaction of BALD with heptaldehyde and is purified by distillation. It is a pale yellow to yellow clear liquid which is extensively used in fragrances and used in commercial products such as detergents, deodorants, fabric softeners, cleaners, shampoo and soap. It is also used in food applications. ACA blends easily and assists in fixation of the fragrance. Because of its fragrance quality and olfactory characteristic, there is no product that can be said to be a substitute to ACA.

55. According to the parties, manufacturers of ACA produce the product to the same level of purity, regardless of end-use application. The parties therefore consider that any further distinction by end-use (*e.g.*, food and fragrance applications) would be unnecessary, since all of Kalama's production of ACA is at the fragrance level and DSP does not produce ACA. The market investigation confirmed that virtually all manufacturers produce at the same level of purity and indicated that ACA should be considered as a separate product market.

56. **HCA** is a pale yellow to yellow clear liquid. It is also used in food and fragrance applications. HCA is similar to ACA; however, it is the preference of many perfumers who consider HCA to be finer, more floral and delicate and less fatty. HCA is found in numerous soap, detergents and cosmetics. Other products incorporating HCA are anti-perspirants, deodorants, fabric softeners and shampoos. HCA is made from the aldol condensation reaction of BALD with C-8 aldehyde with purification by distillation.

57. The parties submit, due to the above arguments, that there is no substitute for HCA, thus, it should be considered as a separate product market.

58. DSP does not produce HCA, only Kalama does. According to the parties, all manufacturers of HCA produce this product to the same level of purity, regardless of end-use application (*i.e.* food and fragrance applications). They further state that any further distinction by end-use would not be necessary.

59. None of the respondents to the market investigation indicated that HCA should be segmented by end application, on the contrary, the majority stated that HCA is a separate market and that there are no close substitutes for this product.

60. **MCA** is also a pale yellow to yellow clear liquid used in food and fragrance applications, such as soaps, perfumes and household goods. MCA has a strong sweet, spicy, balsamic and cinnamon note and it is made from the aldol condensation reaction of BALD with proponaldehyde with purification via distillation. The parties believe that due to its individual fragrance quality and olfactory characteristic, MCA has no close substitutes.

61. DSP does not produce MCA, only Kalama does. However, Kalama recommenced production of MCA in 2009[18]. All manufacturers of MCA produce this product to the same level of purity, regardless of end-use application. The parties, therefore, consider that any further distinction by end-use is, again, not necessary in this case. The market investigation did not dispute the parties' arguments. One respondent pointed out that it produces a variant of its standard MCA but it equally explained that this material was produced with certain specifications, which are not common to the industry, to satisfy one customer's request.For the sake of completeness, the parties also note that when ACA, HCA and MCA are used for fragrance applications, manufacturers will add an antioxidant package[19] to prevent those chemicals from changing in appearance. This antioxidant package is not added for food applications as it is not generally used in products for human consumption. Sometimes the antioxidant package is replaced by vitamin E which has also antioxidant properties but is safe for human consumption.

62. **CA** is a pale yellow to dark yellow clear oil liquid and is also a derivative of BALD. It is used in food and fragrance applications. CA is an aromatic aldehyde, widely used in flavouring where a cinnamon character is desired. Although it is found in nature as the main constituent of cassia and cinnamon bark oils, Kalama's CA is produced synthetically. CA is produced by the aldol condensation reaction of BALD with acetaldehyde with purification via distillation. CA adds spicy oriental notes to soap, perfumes and household items. In Europe and the US, CA is popular in bakery goods, toothpaste, chewing gum, candy and mouthwash. Kalama's CA is an unsaturated aldehyde so it is able to react easily to create many different compounds which are used in a wide range of fragrance compositions. Kalama's CA is also used in the US to a minor extent in the formulation of drilling mud[20], however, the same purity level is used for this end-application by Kalama. For this reason the parties consider CA as a relevant product market due to its individual fragrance quality and olfactory characteristics without any further sub-segmentation.

63. Moreover, the parties submit that all of CA manufacturers produce this product at the same level of purity irrespective of the end application. The market investigation verified that CA

---

18 Kalama produced small quantities of MCA in 2007 under a permit for experimental production from the local environmental authorities in the State of Washington. This permit was not renewed in 2008, and in 2009, Kalama restarted production after obtaining the adequate local environmental permit to produce MCA.

19 An antioxidant package may consist of any substance having antioxidant effect.

20 All sales to customers using CA for drilling mud are in the US and represent about [0-5]% of the total worldwide consumption of CA.

constitutes a separate relevant product market and that manufacturers produce CA at the same level of purity.

64. In addition to the above products, Kalama used to produce lily aldehyde (another derivative of BALD). Kalama started producing this chemical in 2009 but in April 2010 it stopped manufacturing this product as a result of safety and technical issues and now it does not intend to restart the production of lily aldehyde[21]. DSP does not produce any of the BALD derivatives mentioned above.

65. In light of the above, it could be concluded that each of the BALD derivatives (*i.e.* ACA, HCA, MCA and CA) are likely to constitute relevant product markets. Specifically with respect to ACA, HCA and MCA there is no need to conclude on whether they should be further segmented on the basis of fragrance and food applications as in any case, the quantities of each of those products sold for food applications are so small at world level that Kalama's market position with respect to each of them would be unchanged[22].

B. Geographic market definition

B.1 Benzoic acid (BA)

66. In its decision *Arsenal/DSP* the Commission found that the relevant geographic market for solid BAwas EEA-wide because: (i) sales from the US or Chinese producers in the EEA are minimal and each account for about 1% to 3% of the market respectively; (ii) tariffs and transport costs constitute important barriers to entry into the EEA; (iii) the prices in the different regions of the world are not closely correlated; and (iv) Chinese imports of solid BA are less attractive to the EEA customers due to reliability and quality issues.

67. With respect to liquid (technical grade) BA, the European Commission's market investigation showed that the geographic market for liquid BA is possibly narrower than the EEA since

---

21 The notifying party submits that when Kalama was producing lily aldehyde, it experienced serious production issues related to excessive raw material usage and chronic maintenance problems with the equipment needed for production. Kalama submits that it does not have the technological capacity to make the new formulation for lily aldehyde which has been proposed by BASF and now accepted by Procter & Gamble, the largest purchaser of lily aldehyde in the world. Kalama estimates that to achieve the new formulation, it would need to expand R&D efforts and invest at least […] for new distillation and reaction equipment. Kalama also estimates that it would take it at least […] to try to achieve the manufacturing of the new formulation, without any guarantee that it will succeed. In view of the unsuccessful earlier attempts to enter the market for lily aldehyde, the time and costs associated with the development of the new formulation and the uncertain outcome of these efforts, Kalama does not intend to restart the production of lily aldehyde.

22 According to the notifying party's submissions the quantities of food-grade of respectively ACA, HCA and MCA are the following on a world-wide basis: (i) for ACA <0.01 metric tonnes per year representing a value of less EUR 25 000 or > 1% of the total world market, (ii) for HCA <0.05 metric tonnes per year representing a value of less EUR 15 000 or > 1% of the total world market, (iii) for MCA <0.02 metric tonnes per year representing a value of less EUR 1 000.

liquid BA solidifies at 122°C and therefore can only be transported in heated containers for a maximum distance up to 2,000 Km.

68. Only DSP sells liquid (technical grade) BA in the EEA from its production plant in Rotterdam. Kalama also produces liquid (technical grade) BA, however, it only sells it in the US where it has the production plant, and has never sold it in the EEA. According to Kalama transport costs over long distances are prohibitive.

69. The notifying party agrees with the Commission's geographic market definition in *Arsenal/DSP* decision.

70. The market investigation fully confirmed the Commission's arguments in *Arsenal/DSP* case. According to the majority of the respondents, there are important entry barriers to the EEA (transport and custom costs are significant), sales from other regions (namely US and China) are negligible and prices differs between the regions. Finally, regarding liquid (technical grade) BA, the bulk of the respondents considered that the geographic scope could be narrower than the EEA, since liquid BA has to be transported in heated containers.

71. Based on the above in can be concluded, consistently with the Commission precedent, that the geographic market of solid technical grade BA is EEA-wide in scope. As far as liquid technical grade BA is concerned, there is no need to conclude on whether this could be narrower than the EEA, given that no competition concerns could arise under any alternative market delineation.

B.2 Sodium benzoate (NaB)

72. In case *Arsenal/DSP*, the Commission pointed to the existence of an EEA-wide market for NaB. In this regard, the Commission noted that (i) most EEA customers source their supplies from producers based in the EEA (ii) the main suppliers of NaB sell most of their output in the respective home (regional) markets, (iii) EEA based producers have a competitive advantage with respect to the other suppliers located outside the EEA due to ocean freights and customs duties, (iv) prices of NaB diverge between the EEA, Asia and North America. However, the Commission did not take a final position on whether the relevant geographic market of NaB was the EEA or wider.

73. The notifying party considers that, on the narrowest possible definition, the potential relevant geographic market is EEA-wide in scope but that it is more appropriate to define the potential relevant geographic market for NaB as worldwide. Indeed, both Kalama and DSP like other producers sell NaB on a worldwide basis. In addition, the notifying party maintains that transportation of NaB can be easily done over long distances and does not require special transportation means. Transportation costs and tariffs in the EEA are not cost prohibitive for imports of NaB into the EEA from the US or China.

74. The majority of the respondents to the market investigation pointed towards an EEA market for NaB for the same reasons explained in recital 72. Most of them do not plan to increase its purchases from outside the region, but will consider doing it if a price increase would follow the proposed transaction. At the same time some customers also submitted they are currently purchasing NaB from different world regions, and in particular from Asia, the US and the

EEA. Additionally, according to the CEH Benzoic Acid Report, Chinese imports into EEA account for 20-30% of the Western European consumption of NaB.

75. There is not conclusive evidence as to whether the market for NaB is worldwide or EEA in scope. Nevertheless, given that competition concerns would not arise regardless of the definition retained, the geographic market definition can be left open.

B.3 Benzaldehyde (BALD)

76. The Commission has never analysed the geographic scope of the market for BALD.

77. The notifying party considers that the potential relevant geographic market for BALD is worldwide for the following reasons. All major manufacturers of BALD, including Kalama and DSP, ship BALD on a worldwide basis. For suppliers of BALD, tariffs for imports into the EEA are not cost prohibitive (around 5–6%). Equally, freight costs are also not cost prohibitive (whether BALD is shipped in drums or in ISO freight containers). Customers of BALD can order BALD from any supplier, irrespective of geographical location anywhere in the world.

78. The market investigation did not fully support the above arguments. First, while all major producers transport BALD cross-regionally, EEA customers tend to rely on EEA based producers. Also, depending on the customers' needs a local supplier is vital. In this sense, large volumes of BALD can be shipped all over the world, however, small quantities (specially linked to those used in flavours or fragrances) should be supplied by regional producers; otherwise the transport costs are excessive. On the other hand, the majority of the customers indicated that prices are generally similar in all regions and that, if a price increase arises, they would certainly consider purchasing from outside the EEA. One respondent also stated that a diversified sourcing portfolio of suppliers is necessary, given that there are no many suppliers in the EEA. Therefore, non-EEA based producers are seen as complementary for BALD customers.

79. The geographic market definition can be, however, left open as no competition concerns would arise from the transaction regardless of the geographic scope of this market (*i.e*. EEA or worldwide).

B.4 Benzoic alcohol (BALC)

80. The notifying party considers that the potential relevant geographic market for BALC is worldwide for the following reasons. All major manufacturers of BALC, including Kalama and DSP, ship BALC on a worldwide basis. For suppliers of BALC, tariffs for imports into the EEA are not cost prohibitive (around 5–6%). Equally, freight costs are also not cost prohibitive (whether BALC is shipped in drums or in ISO freight containers). Customers of BALC can order BALC from any supplier, irrespective of geographical location anywhere in the world.

81. The overwhelming majority of the respondents located in the EEA purchase BALC from outside the EEA, in particular from Asia. According to the results of the market investigation approximately 30% of EEA customers' needs are supplied from outside the EEA. Customers

tend to rely on a diversified portfolio of suppliers, including producers from both inside and outside the EEA. However, they tend to rely on EEA based producers from the bulk of their supplies, given that security of supply is essential. Yet, transport costs are not very high (in the order of 5-10% of the total price), and often compensated by lower prices in case of the Asian producers. As well, nearly all customers replied that if a 5-10% price increase occurs in the EEA, they would substantially increment their purchases from producers outside the EEA.

82. The geographic market definition can be, however, left open as no competition concerns would arise from the transaction regardless of the geographic scope of this market (*i.e*. EEA or worldwide).

Downstream markets

Derivatives of BA

B5. Potassium benzoate

83. The notifying party submits that the potential relevant geographic market for potassium benzoate is worldwide. There are currently two main suppliers of potassium benzoate in the world namely, Kalama and Macco Organiques Inc. (Canada) ("Macco Organiques"). Both Kalama and Macco Organiques ship to customers anywhere in the world and for Kalama tariffs and transportation costs are not a barrier to sell into the EEA. The totality of the worldwide production of potassium benzoate is sold almost exclusively in North America where manufacturers of food products and drinks use potassium benzoate to claim low sodium content. The largest customers in the world are in fact Pepsi and Coca Cola. The demand for potassium benzoate in the EEA is very limited (estimated only 100 metric tons per year)[23].

84. The market investigation confirmed that transport costs are low (about 5% of the total price). Also there were some indications pointing towards a North American market, since most of the demand of potassium benzoate comes from this region.

85. Based on the above, the market for potassium benzoate can be considered as worldwide in scope.

B6. Benzyl benzoate

86. The notifying party submits that the potential relevant geographic market for benzyl benzoate is worldwide in scope. In this respect, it argues that all main suppliers of benzyl benzoate manufacture this product to customers around the world from manufacturing locations in other countries. This is the case of Kalama, Tessenderlo (Belgium), Lanxess/Gwualior (India), Wuhan Youji (China), among others. Additionally, the notifying party maintains that benzyl benzoate is easily transported in drums and transportation costs and tariffs do not have a significant impact on pricing. Tariffs for benzyl benzoate are typically around 5% to 10% around the world.

[23] See CEH Benzoic Acid report at page 32.

87. The main producers of benzyl benzoate confirm that the market for this product is likely to be world-wide as they consider the market essentially homogeneous and believe that transportation costs and import duties do not pose a real obstacle to trade benzyl benzoate at world level. In fact all producers which replied to the Commission investigation sell in all the continents. One producer stated that generally European users prefer to source benzyl benzoate from European based suppliers to shorten the lead times. However, another pointed out that this does not represent a disadvantage for material originating outside the EU as a significant share of such sales are made through traders (which store benzyl benzoate) which can provide final customers with flexibility of delivery, short lead times and reliability of supply.

88. However, given that the transaction would not lead to competition concerns under any geographic market definition, the question whether the benzyl benzoate market is EEA or worldwide in scope can be left open.

B7. Benzoate plasticizers

89. In the *Arsenal/DSP* decision the European Commission found that the geographic market for di-benzoate plasticizers is subject to certain constraints, such as transport costs and customs tariffs. Indeed, transport costs account for approximately 8% to 10% of the cost of di-benzoate plasticizers shipped between the US and Europe and there is a 6.5% tariff for benzoate plasticizers entering the EEA. Additionally, the Commission noted that there were no exports from China to the EEA and trade between the US and the EEA was very limited. Therefore it came to the conclusion that the relevant geographic market for benzoate plasticizers was EEA-wide in scope.

90. The majority of the competitors regarded the market as being EEA, acknowledging that transport costs and custom tariffs exert constraints on the di-benzoate plasticizers' trade flows. In fact, one of the respondents pointed out that there is usually little intercontinental trade in this product. Most of the respondents believed that the same considerations can be applied to mono-benzoate plasticizers.

91. In view on the above arguments, it can be concluded that the market for benzoate plasticizers is EEA in scope.

Derivatives of BALD

B8. Amyl cinnamic aldehyde (ACA), Hexyl cinnamic aldehyde (HCA) Methyl Cinnamic aldehyde (MCA), Cinnamic aldehyde (CA)

92. The notifying party submits that the relevant geographic markets for ACA, HCA, MCA, CA are each worldwide in scope. In this respect, it argues that all main suppliers of each of those chemicals, including Kalama, supply such products to customers around the world from manufacturing locations in other countries. Each of those products can be easily transported in drums and transportation costs and tariffs do not have a significant impact on pricing. Tariffs for BALD derivatives are typically around 5% to 10% around the world.

93. Supporting the EEA scope of the market for BALD derivates, some respondents stated that the geographical location of the suppliers could be a relevant factor as regards the customers' requirements of delivery time, reliability of supply, and flexibility of delivery. Also, there are suppliers that only produce and supply within the EEA, while others supply the EEA from outside. On the other hand, the market investigation confirmed that transport costs are about 5%, and that the role of non-EEA suppliers is important for some products, specifically for ACA and HCA.

94. For the purpose of this decision, the market definition of BALD derivatives (*i.e.* ACA, HCA, MCA and CA) can be left open, since regardless of the geographic market definition (EEA or worldwide) no competition could arise from the transaction.

V. COMPETITIVE ASSESSMENT

95. The transaction gives rise to four horizontally affected markets, namely the market for (i) solid technical grade benzoic acid ("BA"), (ii) sodium benzoate ("NaB"), (iii) benzaldehyde ("BALD") and (iv) benzyl alcohol ("BALC"). In addition there is a number of vertically affected markets, namely, (v) BA upstream; sodium benzoate, potassium benzoate, benzyl benzoate and benzoate plasticizers, downstream and (vi) BALD, upstream; amyl and hexyl cinnamic aldehyde ("ACA" and HCA"), methyl cinnamic aldehyde ("MCA") and cinnamic aldehyde ("CA") downstream.

96. This operation can be distinguished from the earlier case M.5153 –Arsenal/DSP. In that case the two EEA producers of BA and its derivatives were to merge. In the current case one of the European producers is being acquired by an American company with comparatively small operation in the EEA.

A. HORIZONTAL OVERLAPS

A.1. Benzoic acid (BA)

97. As explained at recital 12 only DSP manufactures ultra pure and animal feed BA while both DSP and Kalama produce solid and liquid technical grade BA at their respective plants in Rotterdam and in the USA.

98. Kalama although it sold modest quantities of solid technical grade BA in the EEA in the past, in 2009 it sold none as transportation costs and tariffs made exports of small quantities of BA from the US to the EEA unattractive[24]. Moreover, it has never sold any liquid BA in the EEA since as explained above this product cannot economically be shipped over long distances[25].

---

[24] In 2009, Kalama's EEA market share is [0-5]. In 2007, Kalama had [0-5]% and in 2008 less than [0-5]% market share in the EEA.

[25] Currently, all sales of liquid technical grade BA by Kalama are [Details on contractual terms with customers].

99. The envisaged transaction will not have any material impact on the competitive structure of the EEA market for both solid technical grade and liquid BA as there will be no increase in DSP's market share as a result of the combination with Kalama. In fact, post-transaction DSP (with [50-60]% market share) will continue to face competition in the EEA mainly from Genovique ([40-50]%) as well as from Wuhan ([0-5]%) which most of the respondents to the Commission's market identified as an important global supplier of BA.

100. Additionally, the notifying party stresses that in any case Kalama and DSP cannot be considered as close competitors with respect to BA in the EEA. The Commission recognised this in its decision in the case M.5153- Arsenal/DSP[26] where it concluded that the Kalama did not significantly constrain the European players. That decision covered the period to 2007, since then Kalama has stopped selling in the EEA and offers even less constraint.

101. It follows from the foregoing that the envisaged transaction will not significantly impede effective competition in the internal market in relation to BA.

A.2. Sodium benzoate (NaB)

102. On an EEA-wide market for NaB, the transaction would result in a small market share increment of approximately [0-5]% (Kalama) to the market share of DSP ([30-40]%). In a wider product market including also potassium benzoate, the parties' market position would remain unchanged due to the limited size and value of the market for potassium benzoate[27]. The notifying party argues that post-transaction DSP and Kalama will continue to face strong competition from well established players such as Genovique and Wuhan. Additionally, the notifying party underlines that according to the CEH Benzoic Acid Report, Chinese imports into the EEA account for 20-30% of the Western European consumption of NaB and that Chinese producers have reasonable quality products and are able to compete with European producers[28.]

103. The market investigation confirmed this contention. A number of customers currently buy NaB from Chinese suppliers and most customers consider imports of NaB from China as an alternative source of supply for this product should the price raise in Europe by 5-10%. The same findings were reported by the Commission in its previous decision Arsenal/DSP[29].

104. Similar considerations apply with respect to a world-wide market for NaB especially given that Asia is the largest producer of NaB[30]. In support of this contention, one large consumer of NaB pointed out that in its view there are globally sufficient sources of NaB from which it could secure its supplies.

---

26 See recital 254.

27 The EEA market for potassium benzoate is estimated to be 100 metric tonnes as opposed to the NaB market amounting to 23 500 metric tonnes.

28 CEH Benzoic acid Report, at pag 8.

29 See recital 264.

30 CEH Benzoic acid Report, at pag 51.

105. It follows from the above that the envisaged transaction is unlikely to lead to a significant impediment of effective competition on the market for NaB under any reasonable alternative geographic market definition.

Table 1: NaB world-wide and EEA-wide market shares (volume) in 2009 (merchant market)[31]

Relevant Product Market	Estimated market shares				
NaB	**DSP**	**Kalama**	**Genovique**	**Chinese suppliers**	**Others**
Worldwide	[20-30]%	[10-20]%	[5-10]%	[40-50]%	[10-20]%
EEA	[30-40]%	[0-5]%	[30-40]%	[30-40]%	

A.3. Benzyl Alcohol (BALC)

106. On a world-wide market for BALC, the parties would have a combined market share of [10-20]% (DSP: [10-20]%, Kalama: [5-10]%). However, as shown in table 2, other strong players such as Lanxess/Gwualior and Tessenderlo are present on the market. As a consequence, the transaction would not raise competition concerns.

107. The same arguments apply with respect to the narrower EEA-wide market for BALC where the parties' combined market share would amount to [20-30]% (DSP: [20-30]%, Kalama: [0-5]%). Lanxess/Gwualior and Tessenderlo, among others would again exert competitive pressure on the parties within the EEA.

108. It can be concluded from the above that the envisaged transaction will not significantly impede effective competition in the internal market in relation to BALC.

Table 2: BALC world-wide and EEA-wide market shares (volume) in 2009 (merchant market)[32]

Relevant Product Market	Estimated market shares				
BALC	**DSP**	**Kalama**	**Tessenderlo**	**Gwualior/Lanxess**	**Others**
Worldwide	[10-20]%	[0-5]%	[20-30]%	[20-30]%	[30-40]%
EEA	[20-30]%	[0-5]%	[20-30]%	[30-40]%	[20-30]%

A.4. Benzaldehyde (BALD)

109. On a world-wide market for BALD, the parties would have a combined market share of [40-50]% (DSP: [30-40]%, Kalama: [5-10]%). The notifying party submits that post-transaction the merged entity will continue facing strong competition from well established players such as Lanxess/Gwualior.

31 Source: Parties' estimates.

32 Source: Parties' estimates.

110. Moreover, in one its internal document[33] DSP underlines that in the last three years the production of several large volumes of BALD derivatives has shifted to India and China, therefore, currently a large share of the world demand for BALD comes from those countries which are mainly supplied by local producers. Among those, Gwualior/Lanxess is the market leader in India by a large margin. On the other hand the US market for BALD is small and while Kalama mainly supplies this market DSP is modestly present. It follows from the foregoing that at world level there are a number of suppliers likely to discipline the merged entity post-transaction.

111. These views were confirmed by the results of the market investigation. Additionally, most of the customers interviewed submitted that they generally do not enter into exclusive contracts with their suppliers but rather split orders as to mitigate supply disruption risks. As a consequence, they are flexible and can easily change the allocation of their purchases between the different providers in order to best address their needs and counteract prices rises.

112. The market investigation also found additional BALD is expected to be available on the merchant market. One of the respondents is in the process of significantly expanding its production capacity of BALD and another has plans under consideration to enter the market in the short to medium term.

113. It follows from the above that the envisaged transaction is unlikely to raise competition concerns in a world-wide market for BALD.

114. The same holds true on an EEA-wide market. Thus, although DSP has a high market share ([80-90]%) Kalama stopped selling BALD in the EEA[34]. Therefore the proposed transaction will not affect the market situation in the EEA.

33 [Reference to internal document].

34 According to the information provide by the notifying party it results that in 2008 Kalama's market share in the EEA amounted to [5-10]% while in 2009 less than [0-5]%.. In 2008, Kalama supplied a small quantity on demand to [name of customer] (totalling approximately EUR […]) as a tail off to its prior supply agreement.

Table 3: BALD world-wide and EEA-wide market shares (volume) in 2009 (merchant market)[35]

Relevant product market	Estimated market shares					
BALD	**DSP**	**Kalama**	**Tessenderlo**	**Indian suppliers**	**Others**	**Lanxess/Gwualior[36]**
Worldwide	[30-40]%	[5-10]%	[0-5]%	[30-40]%	[5-10]%	[10-20]%
EEA	[80-90]%	[0-5]%	[0-5]%	[5-10]%		[0-5]%

115. Kalama submits that its ability to supply BALD has decreased in recent years with the permanent closure and subsequent partial demolition of its phenol plant in December 2006[37]. This plant made BA as an intermediate product in the manufacture of phenol. This process is very inefficient in comparison to the modern benzene to cumene process for phenol production. Kalama cannot restart its closed phenol production facility because the operating permits issued by the relevant US authorities have expired.

116. Finally, Kalama submits that there would be no commercial incentives for it to restart its phenol production facility, particularly since it would incur capital costs of somewhere between EUR 7–15 million. […]. In fact, Kalama only sold a few drums (a value of less than EUR […]) on a spot basis in the EEA in 2009.

117. It follows from the foregoing that the envisaged transaction will not change the competitive structure of the EEA market of BALD as DSP's market position in Europe post-merger will not be strengthened.

118. It can therefore be concluded that the envisaged transaction will not significantly impede effective competition in the internal market in relation to BALD.

A.5. Conclusion

119. For the above reasons, the notified operation does not raise serious doubts as to a significant impediment to effective competition on any of the markets in which horizontal overlaps between the parties' activities exist.

35 Source: Parties' estimates.

36 Data from the market investigation.

37 As the production process used by Kalama was inefficient compared to the cumene process (Kalama estimates its raw material efficiency was at best [70-80]% compared to major producers who achieve higher than 95% raw material efficiency), Kalama discontinued its outdated phenol production.

B. VERTICAL RELATIONSHIPS

B.1. BA / NaB, Potassium benzoate, Benzyl benzoate, Benzoate plasticizers

120. The transaction gives rise to vertical relationships between the upstream market for (i) BA where DSP has a substantial market position in Europe and the downstream markets for NaB where both DSP and Kalama are active and the markets for potassium benzoate, benzyl benzoate and benzoate plasticizers where only Kalama is active.

121. In the course of the market investigation some concerns of foreclosure have been voiced with respect to the vertical relationship between the parties' activities in the above vertically related markets, due to the fact that currently DSP supplies merchant BA to producers of the downstream products, potassium benzoate, and benzoate plasticizers. DSP does not sell any BA to producers of benzyl benzoate.

122. 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[38] ("the Non-Horizontal Merger Guidelines"): "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".

123. In assessing the likelihood of anticompetitive input foreclosure, the Commission examines whether: (i) the new entity would have the ability post-merger to foreclose access to inputs; (ii) it would have the incentive to do so; and (iii) a foreclosure strategy would have a significant detrimental effect in the downstream market.

124. As explained below, the data provided by the parties (including the margins made on each affected product) in combination with the results of the market investigation showed that while the merged entity may have limited ability to foreclose it will not have the incentive to do so. Therefore, the proposed transaction will not significantly impede effective competition on the downstream markets for BA derivatives.

[38] OJ C265, 18 October 2008, p. 6.

B.1.1. *BA upstream / NaB downstream*

Table 4: Vertical relationship between benzoic acid (BA) upstream and sodium benzoate (Nab) downstream in 2009[39]

Upstream relevant product market	**Estimated market shares**				
Solid technical grade BA	**DSP**	**Kalama**	**Genovique**	**Chinese suppliers**	**Others**
EEA	[50-60]%	-	[40-50]%	[0-5]%	[0-5]%
Downstream relevant product market	**Estimated market shares**				
NaB	**DSP**	**Kalama**	**Genovique**	**Chinese suppliers**	**Others**
Worldwide	[20-30]%	[10-20]%	[5-10]%	[40-50]%	[10-20]%
EEA	[30-40]%	[0-5]%	[30-40]%	[30-40]%	

125. As shown in Table 4, DSP has a large share of sales of solid technical grade BA into the EEA which is a key input for the production of NaB. On the downstream market for NaB the merged entity would have a market share of [30-40]% in the EEA and [30-40]% world-wide.

126. Notwithstanding the above, the notifying party submits that it would not be able to foreclose the access to BA to the detriment of its downstream rivals with respect to NaB under any alternative geographic market definition due to the following reasons.

127. On an EEA-wide market for NaB, the merged entity does not have the ability to foreclose NaB producers from access to BA as, according to the parties, DSP does not have customers which purchase BA for the production of NaB in the EEA while Kalama does not produce or sell any BA at all in the EEA.

128. On a global basis, DSP makes only limited sales of BA to customers that can produce NaB. Such customers would include […]. Kalama's […] customer that purchased BA to make NaB in 2009 was […] which bought BA for a value of EUR […].

129. As confirmed by the results of the market investigation, the largest suppliers of NaB are vertically integrated into the supply of BA (Eastman Chemicals/Genovique and Wuhan). As a consequence the merged entity would be unable to foreclose them post transaction as they are not dependent on third parties for supplies of BA.

130. Non-integrated customers could source their BA requirements from Chinese suppliers such as Wuhan, which many respondents to the market investigation indicated as a valid

39 Source: Parties' estimates.

supplier, thus removing any ability of the merged entity to foreclose access to BA globally. In this respect, the notifying party stresses that there are no quality considerations that could prevent producers of NaB to buy their BA requirements from certain Chinese suppliers. The quality and grade of BA used does not materially affect the quality of the NaB produced as the production process for NaB allows for the removal of impurities.

131. A number of the respondents to the market investigation, including one large soft drinks company, confirmed that it purchased NaB from Chinese suppliers. Therefore the (Chinese) BA used by those suppliers is of sufficient quality to allow the manufacture of NaB suitable for the food and beverage industry where this product is primarily used[40].

132. Finally, non-integrated producers could also complement their BA purchases buying this product from the distributors supplied by DSP. According to the data provided by the notifying party, sales of technical BA to distributors account for 10% of DSP's total sales into the merchant market.

133. It follows from the foregoing that a foreclosure strategy by the merged entity would be likely defeated as non- integrated producers of NaB could purchase their BA's requirements from alternative sources while the main suppliers are already integrated in the production of BA.

134. Moreover, the notifying party stresses that the merged entity can neither be sure about its customers' end use of BA nor of the proportions of BA which are used to manufacture respectively NaB and any other BA derivative which they might manufacture. As a consequence, any foreclosure attempt would risk losing sales of solid BA to customers which do not strongly compete on the downstream market for NaB but which use BA for other purposes. In such situations it is extremely unlikely that there will be sufficient incremental NaB demand available to the parties so as to allow the merged entity to significantly strengthen its position on the market for NaB in order to justify a foreclosure strategy. It follows from the foregoing that the parties would have limited incentives to limit access to solid BA to the detriment of non integrated NaB producers since the chances to gain high market shares on the downstream market for NaB appear low. Furthermore, the integrated producers account for over 50%[41] of the NaB not produced by the parties at the global level.

135. A further feature to be taken into consideration is the fact that the volume of BA produced by DSP is directly related to the volumes of BALD and BALC produced, as these three chemicals are co-produced by DSPs oxidation station. Therefore, any reduction in output of BA directly also affects the output of BALD and BALC and the consequent margins earned from the sales of those products. As a result, the success of any foreclosure strategy against NaB producers is rendered even more unlikely by the interdependence of these upstream products.

---

40 According to the parties' estimates, the food and beverage sector account for respectively 85% of Kalama's sales of NaB and 80% of DSP's sales of NaB.

41 One or more of the Chinese suppliers may not be integrated but none of the Chinese suppliers purchases BA from the parties.

136. Finally, it appears that any attempt of foreclosure by the merged entity post-transaction would not have an impact on the final customers of NaB as the main producers of this product (such as Eastman Chemicals/Genovique and Wuhan) are not reliant upon the parties to manufacture NaB. According to the parties the leading independent integrated producers have together substantial unused capacity which would allow them to make good a large proportion of any reduction arising from the withdrawal of BA supplies to the non-integrated suppliers.

137. Additionally, as already explained above, there are large Chinese producers of NaB very active worldwide with significant exports of this product in both the EEA and the USA. Therefore it is unlikely that post-transaction the merged entity would be able to significantly restrict the sources of NaB available on the world-wide market. A large soft drinks manufacturer, a large consumer of NaB, confirmed that it would not have problem to secure its NaB purchases given the number of suppliers available on this market.

138. In the light of the above, it can be concluded that the parties would have limited ability to foreclose and in any case low incentives to do so; therefore the proposed transaction has no impact on the downstream market for NaB. Other market players would also have the ability to eliminate or at least mitigate the effects of attempt at foreclosure so that there is unlikely to be any effect.

139. It should therefore be concluded that the transaction would not lead to a significant impediment to effective competition in the market for NaB.

B.1.2. *BA upstream / Potassium benzoate downstream*

Table 5: Vertical relationship between benzoic acid (BA) upstream and Potassium benzoate downstream in 2009[42]

Upstream relevant product market	**Estimated market shares**				
Solid technical grade BA	**DSP**	**Kalama**	**Genovique**	**Chinese suppliers**	**Others**
EEA	[50-60]%	-	[40-50]%	[0-5]%	[0-5]%
WW	[20-30%	[5-10]%	[5-10]%	[60-70]%	[0-5]%
Downstream relevant product market	**Estimated market shares**				
Potassium Benzoate	**Kalama**	**Macco Organique**			
Worldwide	[50-60]%	[40-50]%			

140. In each of the vertically related markets for solid technical grade BA upstream and potassium benzoate downstream, the merged entity would have a market share exceeding [50-60]%, as displayed at Table 5.

141. The use of potassium benzoate in diet soft drinks represents approximately 80% of the total worldwide consumption of this product. The largest customers of this product are the major soft drinks manufacturers who use it for low sodium variants of their products. Virtually all the consumption of this product is concentrated in the US. The only company competing with Kalama on the market for potassium benzoate is Macco Organique, a Canada based company, which currently obtains all of its supplies of BA from DSP. Macco Organique produces both NaB and potassium benzoate.

142. It appears from the above that, prima facie, the merged entity would enjoy a certain market power against its downstream rival.

143. Notwithstanding this, DSP submits that any foreclosure strategy against Macco Organique or any potential producer of potassium benzoate would not be sustainable for the reasons explained below.

144. First of all, the notifying party claims that Macco Organique could buy BA from Chinese suppliers such as Wuhan, which the respondents to the market investigation identified as one

42 Source: Parties' estimates.

of the main global BA suppliers. In this regards, it is worth observing that according to the data of the U.S. Department of Commerce, sales from Chinese suppliers account for approximately 22% of the imports of BA into the U.S.[43]

145. Additionally, the notifying party submits that there are no quality considerations which bind Macco Organique to source BA only from DSP. In fact, there is no need to use the higher purity BA of DSP to produce potassium benzoate suitable for the beverage industry. This is proved by the fact that although Kalama manufactures potassium benzoate from a less pure BA, it anyway sells its product to both Coca Cola and Pepsi. Additionally, as already pointed out above, the market investigation showed that there are currently some end-customers using NaB of Chinese producers for the food and beverage industry. This therefore indicates that the BA used by Chinese producers is suitable to manufacture BA derivatives for the food and beverage industry as in the case of NaB and potassium benzoate.

146. Furthermore, it appears from the results of the market investigation that customers of potassium benzoate would not be against the use of Chinese BA for the production of potassium benzoate if it were necessary to secure the availability of potassium benzoate on the market, on the condition that the final quality of this product is not affected. As a consequence, Macco Organique and potential producers of potassium benzoate could in principle use BA of lower purity and, if needed, remove the impurities during the manufacturing process.

147. In addition to the above, the notifying party stresses that the merged entity would have difficulties to target a foreclosure strategy to the detriment of Macco Organique's production of potassium benzoate. In fact, DSP claims that it cannot discriminate between the relative proportions of BA used to manufacture respectively NaB and potassium benzoate. As a consequence any attempt of foreclosure would risk losing sales of BA used for both NaB and potassium benzoates, without any guarantee for the merged entity to capture all the sales of potassium benzoate lost by the foreclosed competitor as to gain high market shares on the downstream product market for potassium benzoate. This consideration appears realistic given that Kalama does not have enough capacity to produce additional potassium benzoate for the merchant market[44].

148. Furthermore, the notifying party points out that such a foreclosure would have no impact on the downstream customers for potassium benzoate and could even be detrimental for the merged entity.

149. First, DSP states that current suppliers of NaB could easily enter the market for potassium benzoate in case of a price raise and therefore, defeat any attempt of foreclosure by the merged entity. In this respect, the notifying party explains that the same production process is

---

43 Source: Annex 28 to the form CO: SRI Consulting, Chemical Economics Handbook, benzoic acid, June 2010.

44 According to the parties' submission while the overall total year utilization rate for potassium benzoate in 2009 was [60-70]%, there are months where Kalama is at full or close to full utilization (i.e. greater demand near or in the summer months when demand for soft drinks is at its highest). As such Kalama considers that it has little free capacity for potassium benzoate.

used to manufacture NaB which uses sodium hydroxide as opposed to potassium hydroxide as the base raw material and reacted with BA. Kalama's own experience illustrates that it is easy to do so since its potassium benzoate line was used in the past to produce NaB and has been redeployed from time to time to make NaB. As a consequence, no big capital investments in new technology or production processes would be needed for NaB's manufacturers to start producing potassium benzoate. This contention has been confirmed by a number of NaB producers as well as from Pepsi[45].

150. Second, DSP underlines that the two largest customers of potassium benzoate are [names of soft drink companies] which have all the required power to control any misconduct by the merged entity and sponsor new entry or cross entry of an existing supplier of NaB as they have done in the past with respect to Macco Organique, one of their current suppliers. In this regards, one of the customers of potassium benzoate confirmed that it would resort to this strategy should this be necessary to secure its purchases.

151. Additionally, the notifying party believes that both Coca Cola and Pepsi could also retaliate against any attempted foreclosure. In fact, as these two soft drinks manufacturers are important customers of NaB too, they could decide to withdraw their purchases from of this product from Kalama and DSP and allocate it to their competitors. This theory appears plausible considering that one of the major soft drink manufacturers confirmed to the Commission that there are sufficient suppliers of NaB in the global market.

152. Based on the above, the notifying party claims that a foreclosure strategy with respect to potassium benzoate would risk putting a whole range of revenue streams in jeopardy, namely, the margins earned from sales of BA to [name of customer] and those gained from sales of NaB to [name of customers], worth collectively EUR […] million[46], which in turn are larger than the margins that the merged entity might hope to gain by foreclosing [name of customer] (EUR […] million are the estimated margins deriving from [name of customer] sales of potassium benzoate). Such a strategy would therefore be imprudent.

153. Yet, DSP underlines that the losses that the merged entity would incur if it stopped supplying BA to Macco Organiques, or NaB to Coca Cola and Pepsi by way of retaliation by those companies, are not the only costs that the parties should sustain post-transaction. The volume of BA produced by DSP is directly related to the volume of BALD and BALC produced, as these three chemicals are co-produced in DSP's oxidation station. Therefore, any reduction in output of BA (or NaB) directly affects the potential output of BALD and BALC and the margins earned from the sales of those products. As a consequence, any

---

45 It results from the replies to the market investigation that it is relatively easy for producers of Nab to switch from production of Sodium Benzoate to Potassium benzoate but on an infrequent basis. In fact, in doing so there are extra costs related to the change-over and clean-up of the production line. Also extra storage is required for potassium benzoate raw material namely caustic potash.

46 The parties estimate that the sum of Kalama's margins earned by selling both NaB and potassium benzoate to [name of customers], together with the margins earned by DSP's sales of BA to [name of customer] and NaB to [name of customers] amount to approximately EUR […] million.

foreclosure strategy by the merged entity would be even more difficult under such circumstances.

154. It follows from the foregoing that the merged entity would have limited ability and few incentives to foreclose access to BA against Macco Organique or any potential supplier of potassium benzoate.

155. In the light of the above it can be concluded that the envisaged transaction does not significantly impede effective competition in the market for potassium benzoate[47].

B.1.3. *BA upstream / Benzoate plasticizers downstream*

Table 6: Vertical relationship between benzoic acid (BA) upstream and plasticizers downstream in 2009[48]

Upstream relevant product market	**Estimated market shares**			
Liquid technical grade BA	**DSP**			
Regional (ca-1000 km from DSP plant in Rotterdam)	[90-100]%			
Downstream relevant product markets	**Estimated market shares**			
Di-benzoate plasticizers	**Kalama**	**Genovique**	**Ferro**	**Eig.&Ver.**
EEA	[5-10]%	[80-90]%	[5-10]%	[5-10]%
Mono-benzoate plasticizers	**Kalama**	**Exxon**	**Evonik**	**Others**
EEA	-	[50-60]%	[30-40]%	[5-10]%

156. The envisaged transaction results in a vertical relationship between the upstream market for liquid technical grade BA and the downstream market for benzoate plasticizers where only Kalama is active.

157. Liquid technical BA is a key input accounting for approximately 70% of the raw materials required for the production of benzoate plasticizers. Currently the European market leader for plasticizers, namely Genovique, is vertically integrated in this raw material while the other two main producers, Ferro and Eigenman & Veronelli are completely reliant upon DSP for the supply of liquid BA. As shown in Table 6, DSP holds a market share of 100% in relation to this product. For the reasons explained at recital 11, liquid BA cannot be transported over

47 In this regards, it is worthy to notice that also the US Federal Trade Commission has closed its preliminary investigation of the proposed transaction without raising specific concerns in relation to the potassium benzoate market in the US where almost the whole demand for this product is concentrated.

48 Source: Parties' estimates.

long distances and thus it can be supplied only within a limited radius from the production plant. Additionally, as already pointed out above, liquid BA cannot easily be replaced by solid BA, first as liquid is approximately 10-15%[49] cheaper than the latter and second as an additional investment in melting facilities would be needed if a customer decided to use solid technical BA instead of liquid. Due to these reasons, Ferro, a Belgian producer of plasticizers, confirmed that it would not be willing to switch from liquid BA to solid BA in case of a price increase of liquid BA by 5-10%.

158. It follows from the above that, post-transaction, the merged entity will have a significant degree of market power in the supply of liquid BA to non-integrated producers of plasticizers.

159. Notwithstanding the above, the notifying party argues that post-transaction there would be no incentive to foreclose access to liquid BA to the detriment of producers of either di-benzoate or mono-benzoate plasticizers for the reasons explained hereinafter.

160. Assuming Kalama could readily expand its production and European sales of di-benzoate plasticizers, the merged entity would have an incentive to foreclose Kalama's competitors of plasticizers supplied by DSP whenever the margin earned on Kalama's supplementary sales downstream of plasticisers more than compensate for the loss of the margin foregone in liquid BA following the foreclosure of DSP's customers. According to the notifying party, the average margin earned in 2009 from selling one tonne of BA in the EEA ([…]) amounts to [60-70]% of the average margin earned in 2009 from selling in the EEA the quantity of di-benzoate plasticizers that could be produced with one tonne of BA (EUR […]). Thus, at the current margin levels, the merged entity would have an incentive to foreclose its downstream competitors for di-benzoate plasticizers, if it could capture [60-70]% of di-benzoate plasticizers currently sold by DSP's customers, namely, Ferro and Eigenmann & Veronelli (both plasticizers' manufacturers), which collectively hold a market share of [10-20]% in the EEA. However, this would be unlikely for the following reasons.

161. First, any surplus BA will be in liquid form and therefore not transportable to Kalama's benzoate plasticiser production facilities in the USA.

162. Second, such sales expansion is very significant relative to Kalama's current market share of di-benzoate plasticizers, which only amounted to around [5-10]% in the EEA in 2009.

---

[49] DSP submits that on average, the price of solid BA is higher than the price for liquid BA. In 2009, the average price of liquid BA per MT was EUR […], while the average price of solid technical grade BA for the ten largest customers was EUR […]. When comparing prices of liquid BA and solid technical grade BA to specific customers that purchase similar volumes of either product, prices of liquid BA are in most cases higher, although there are instances in which prices are very similar. [Details on sales terms with customers]. According to one purchaser of liquid BA the cost difference between solid and liquid benzoic acid is ~35Eur/mt (the price ranges between 500-1000 depending on the toluene price).

163. Third, Kalama is currently capacity constrained and, as a consequence, cannot readily implement such foreclosure strategy. Kalama's current utilization rate at October 2010 for di-benzoate plasticizers is approximately [80-90]%. In 2009 its average capacity utilization amounted to [80-90]%.

164. Fourth, post-transaction, the merged entity does not have plans to expand capacity. [Details on the parties' market strategy]. Therefore, only the existing spare capacity has to be taken into account to determine the possible downstream benefits of a foreclosure strategy, and, as a consequence, it is dubious that Kalama would be able to internalise additional BA as to produce sufficient amount of di-benzoate plasticizers for the merchant market so as to make a potential foreclosure a profitable strategy for the merged entity. This is in particular true based on the fact that Genovique has very high market share with respect to di-benzoate plasticizers in the EEA and it is in the process of expanding its sales.

165. Moreover, as in the case of BA used to produce potassium benzoate, should DSP reduce or stop its sales of BA to Ferro or Eigenmann & Veronelli, then DSP should also bear the additional losses on reduced production of the BALD and BALC which are co-produced with BA.

166. Finally, a successful foreclosure strategy seems also implausible considering that Kalama does not currently constraint European producers of di-benzoate plasticizers with its limited imports as confirmed by Ferro in its interview with the Commission. According to Ferro's perception Kalama currently produces a limited range of di-benzoate plasticizers that are not of the same quality of those manufactured by European manufacturers.

167. Based on the above arguments it can be concluded that although the merged entity might have the ability to foreclose the smaller producers of di-benzoate plasticizers in the EEA due to the control of a key input, namely liquid BA, it would have no incentive to do so as such strategy would most likely be unsuccessful. In any event, even under this scenario, it is doubtful that an attempt to foreclose might have an impact on the downstream customers of di-benzoate plasticizers considering that they could easily switch to Genovique to source di-benzoate plasticizers which, as confirmed by the market investigation, has sufficient capacity to meet additional demand of di-benzoate plasticizers.

168. The same conclusion applies to mono-benzoate plasticizers. Although DSP is currently the only supplier of liquid BA to […] (a producer of mono-benzoate plasticizers in the EEA), post transaction it would not have any incentive to discontinue this supply relationship as Kalama has never sold any mono-benzoate plasticizers in the EEA and in the past, only sold mono-benzoate plasticizers to [Name of customer][50]. Additionally, as already explained

[50] […]. The mono-benzoate plasticizer supplied was isodecyl benzoate. Due to competition in the marketplace, including in particular from Eastman Chemicals/Genovique, Kalama was unable to offer a sales price which was acceptable to this customer but which also allowed Kalama to make some profit. It is understood that this customer switched to Eastman Chemicals/Genovique. ExxonMobil is the only supplier of the isodecyl alcohol which is the other raw material required to produce this plasticizer. ExxonMobil is also supplying its own version of isodecyl benzoate and since ExxonMobil is back integrated into the isodecyl alcohol, which is the more expensive component of the plasticizer, Kalama had difficulty competing on the pricing of this product. Finally, this client holds a patent for the use of isodecyl benzoate in the BPO paste formulation and this is by far

above, there are no plans at the moment to start producing plasticizers at DSP's plant in Rotterdam.

169. In the light of the above, the envisaged transaction wills not significantly impede effective competition with respect to the market for benzoate plasticizers.

B.1.4. *BA upstream / Benzyl benzoate downstream*

Table 7: Vertical relationship between benzoic acid (BA) upstream and benzyl benzoate downstream in 2009[51]

Upstream relevant product market	**Estimated market shares**				
Solid technical grade BA	**DSP**	**Kalama**	**Genovique**	**Chinese suppliers**	**Others**
EEA	[50-60]%	-	[40-50]%	[0-5]%	[0-5]%
Downstream relevant product market	**Estimated market shares**				
Benzyl benzoate	**Kalama**		**Tessenderlo**	**Gwualior**	**Others**
Worldwide	[20-30]%		[5-10]%	[10-20]%	[50-60]%
EEA	[0-5]%		[30-40]%	[20-30]%	[30-40]%

170. Benzyl benzoate is a derivative of BA which is used almost exclusively in fragrance applications (99% of the total production on a worldwide basis). It can be made by using different routes either trough an esterification reaction between BALC and BA with purification via distillation (as in the case of Kalama) or by reaction between benzyl chloride and NaB. According to one respondent to the market investigation, benzyl benzoate can also be manufactured using BALD.

171. As shown in Table 7, while DSP is the market leader with respect to the solid technical grade BA in the EEA, Kalama has a limited market presence on the downstream market for benzyl benzoate either within the EEA or world-wide. The market investigation showed that Kalama might have underestimated its market share in comparison to that of its main competitors on the downstream market for benzyl benzoate. However, as explained below, this does not have any impact on the competitive assessment related to the vertical relationship between solid technical BA upstream and benzyl benzoate downstream as, irrespectively of its market share with respect to benzyl benzoate, the merged entity will be unable to foreclose producers of this product.

172. In this regard, the notifying party explains that post-transaction the merged entity would have no possibility to foreclose access to BA because DSP has no customers that purchase

---

the most important application for isodecyl benzoate. This was a further reason which caused Kalama to cease for now producing this plasticizer.

51 Source: Parties' estimates.

BA for the production of benzyl benzoate while Kalama has ceased selling BA at all in the EEA and in 2009 had no sales of BA to benzyl benzoate producers world-wide.[52]

173. This conclusion holds true also in the alternative scenario where producers of benzyl benzoate were to use BALC or BALD as an input material to produce benzyl benzoate. In the case of BALC, there are bigger suppliers than the parties, such as Gwualior/Lanxess and Tessenderlo, to which benzyl benzoate producers could resort (see Table 2), therefore any foreclosure strategy would be easily defeated. In the case of BALD, any attempt of foreclosure by the merged entity would not be sustainable either for reasons explained below in relation to the BALD derivatives.

174. Producers of benzyl benzoate use different routes to manufacture this product, the merged entity would face difficulties in assessing to what extent the input material it sells to its downstream competitor is used for the purpose of the production of benzyl benzoate. Such difficulty further limits the prospect of an input foreclosure strategy.

175. It can be concluded from the above that the envisaged transaction does not significantly impede effective competition in the market for benzyl benzoate.

52 The last sale of BA made by Kalama to a producer of benzyl benzoate was in […], namely, […] in […] for […] metric tons).

B.2. BALD / ACA, HCA, MCA, CA

Table 8: Vertical relationship between benzaldehyde (BALD) upstream and its derivatives downstream in 2009[53]

Upstream Relevant Product Market	**Estimated market shares Main Players**					
BALD	**Kalama**	**DSP**	**Tessenderlo**	**Indian suppliers**	**Others**	**Lanx./Gw.**
Worldwide	[5-10]%	[30-40]%	[0-5]%	[30-40]%	[5-10]%	[10-20]%
EEA	[0-5]%	[80-90]%	[0-5]%	[5-10]%		[0-5]%
Downstream Relevant Product Market	**Estimated market shares Main Players**					
ACA	**Kalama**	**Kao**	**Tessenderlo**			
Worldwide	[10-20]%	[40-50]%	[40-50]%			
EEA	[0-5]%	[50-60]%	[40-50]%			
HCA	**Kalama**	**Kao**	**Tessenderlo**			
Worldwide	[30-40]%	[30-40]%	[30-40]%			
EEA	[0-5]%	[40-50]%	[40-50]%			
MCA	**Kalama**	**Innospec**	**Jayshree (India)**			
Worldwide	[0-5]%	[60-70]%	[20-30]%			
EEA	[0-5] %	[50-60]%	[40-50]%			
CA	**Kalama**	**Gw./Lanx.**	**Wuhan**			
Worldwide	[10-20]%	[10-20]%	[10-20]%			
EEA	[5-10]%	[30-40]%	[10-20]%			

176. The transaction gives rise to vertical relationships between the upstream market for (i) BALD where both DSP and Kalama are globally present and the downstream markets for respectively (ii) ACA, (iii) HCA, (iv) MCA and (v) CA where only Kalama is active. As explained under Paragraph A.8, BALD is a key input for the production of the above BALD derivatives. As already explained at recital 64 Kalama does not produce lily aldehyde anymore, therefore it will not assess further.

177. On the upstream market for BALD, the parties would have a combined market share of respectively [80-90]% (all attributable to DSP) in the EEA and [40-50]% worldwide. On the downstream markets for ACA, HCA, MCA and CA (all BALD derivatives), Kalama has limited market shares both worldwide and particularly in the EEA with the only exception of HCA where its market share amounts to [30-40]% world-wide. In this respect, Kalama explains that its global share of HCA is primarily driven by its supply to [Name of customer

53 Source: Parties' estimates.

and details on contractual terms] pursuant to which Kalama sells a significant portion ([30-40]%) of its HCA production. [Details on contractual terms].

178. In each of these downstream markets of BALD derivatives, there are players constraining Kalama, some of which are currently supplied by DSP with BALD (Kao, Tessenderlo, Innospec and IFF[54]).

179. During the market investigation, some concerns have been voiced as to the possibility by the merged entity to restrict access to BALD to the detriment of Kalama's competitors on the downstream markets for BALD derivatives. However, the arguments submitted by the notifying party combined with the results of the market investigation dispelled those concerns for the following reasons.

180. First, DSP claims that customers of BALD could switch to alternative suppliers of BALD including Lanxess/Gwualior, Tessenderlo[55] and Indian providers, therefore defeating any attempt of foreclosure. The results of the market investigation showed that, globally, there are relatively few alternative sources for the supply of BALD either due to the lack of sufficient production capacity to address an additional demand of BALD on the market or because of the quality of the BALD sold by some providers.

181. For example, one producer of BALD derivatives explained that the quality of the input used to manufacture BALD derivatives has an impact on the efficiency of its production process and therefore on the yields of its BALD derivatives. Despite this, the same respondent stated that it is in the process of qualifying a new supplier of BALD in order to diversify its purchases. Such process is expected to be completed within 6 months.

182. As a consequence, despite the difficulty a customer might face to find suppliers on the global market which are able to meet its quantity and quality requirements, it is in practice possible to find satisfactory alternative suppliers of BALD to DSP.

183. Moreover, the replies to the market investigation indicate that BALD producers are expected to increase production capacity by an amount equivalent to, at least, 12% of the global merchant sales of BALD in 2009 in order to meet the demand for this product on the merchant market.

184. In addition to the above, the notifying party claims, consistently with the findings of the market investigation, that the fact that a number of manufacturers of BALD derivatives are integrated into BALD production (for example Tessenderlo) and/or integrated into other critical raw materials (for example Kao into C-8 aldehyde) further limits the parties ability to pursue any input foreclosure strategy.

---

54 IFF has stopped producing HCA as of mid-2010.

55 Tessenderlo is an integrated producer manufacturing BALD in Belgium and BALD derivatives in the UK. It sells a proportion of its BALD production on the merchant market but is overall a net purchaser of BALD.

185. Based on the above, it appears that the merged entity would have limited ability to foreclose access to BALD post transaction.

186. Furthermore, the major producers of BALD derivatives are typically active across a range of different derivatives. By way of example, Tessenderlo produces ACA, HCA and benzyl benzoate, Kao produces ACA and HCA, Innospec produces MCA and lily aldehyde, Gwualior produces CA and benzyl benzoate, Jayshree produces both MCA and benzyl benzoate. Accordingly, any strategy to foreclose a given downstream competitor with respect to access to BALD, in the hope of gaining sales of a particular downstream derivative, also jeopardises the BALD which that customer uses to produce other downstream derivatives. This would therefore make any attempt of foreclosure costly as the merged entity would risk losing the margin gained on sales of BALD to certain customers without being sure to sufficiently increase its market position with respect to the specific market segment targeted as to make profitable a foreclosure strategy.

187. More fundamentally, as shown in Table 8 and

188. Table 9, Kalama does not have spare capacity to increase to any material extent the production of these BALD derivatives as its lines are now fully utilized. Accordingly, the merged entity would have no incentive to foreclose access to BALD, as Kalama could not expect to gain any significant sales of downstream BALD derivatives, even if the merged entity had the ability to foreclose access to BALD. Any decision by Kalama to expand its production capacity for BALD derivatives would need to be carefully considered, as it would require a material investment of time and costs.[56]

[56] The notifying party submits that in terms of time, a rough estimate would be […] from the time of decision to final installation. In terms of costs, Kalama estimates for an extra capacity of […], approximately […], and for a capacity of […], approximately […].

Table 9: Utilization rates for Kalama's shared lines

Product	2009 (MT)	10 months 2010 (MT)
Total all BALD derivatives	4,588	3,609
Capacity	4,560	3,800
Utilization	[100-110]%	[90-100]%

Table 10: Utilization rates for Kalama's HCA Line

Product	2009 (MT)	10 months 2010 (MT)
HCA	5,010	5,436
Capacity	6,352	5,293
Utilization	[70-80]%	[100-110]%[57]

189. The notifying party also explains that Kalama would have no commercial interest in sacrificing its fatty aldehyde production in order to increase the production of the other BALD derivatives which are co-produced with the fatty aldehydes (ACA, CA, MCA and benzyl benzoate). As shown at table 11, the notifying party's margins gained on fatty aldehydes are higher than margins on ACA, benzyl benzoate and CA. The only BALD derivative with a comparable high margin is that for MCA in which however Kalama has a worldwide market share of [0-5]%. [Details on contractual terms with customers]. Therefore, it cannot be certain of the availability of spare capacity at any given point in future.

Table 11 Variable Margin earned by Kalama, per MT of product (2009):

Product Group	Product	Variable Margin (EUR/MT)	Estimated Market Share (Worldwide)(2009)
BALD derivatives	ACA	[…]	[0-5]%
	CA	[…]	[10-20]%
	MCA	[…]	[0-5]%
	BOB	[…]	[20-30]%
Fatty Aldehydes	C-6	[…]	[5-10]%
	C-8	[…]	[20-30]%
	C-10	[…]	[20-30]%

[57] The achievable capacity for these products is affected by the product mix in any given period. Accordingly, the calculated utilization of above 100% is due to the particular mixture of products actually produced during the period, which allowed higher production rates than would have been possible with the expected product mixture.

190. In this regard, DSP has also pointed out that even if Kalama were in a position to internalize the additional BALD resulting from the vertical integration with DSP, the freight and tariff costs that Kalama should incur to ship BALD from DSP's plant in Rotterdam to Kalama's plant in the city of Kalama (State of Washington, USA) would represent approximately [30-40]% of the product cost. This solution would be expensive and commercially unattractive for Kalama.

191. As discussed above, both Kalama and DSP's production of BALD is dependent on the production of BA. In DSP's case BA, BALD and BALC are co-produced in the same reactors at the same time. BALD and BA are co-produced, and some of the BA is subsequently used to make BALC in Kalama's case. Therefore, any possible foreclosure strategy for a downstream product of either BA, BALD or BALC is to a large extent obstructed by the interdependence between these upstream products.

192. Based on the above arguments it appears that the merged entity would have limited ability and incentive to foreclose its downstream competitors on the markets for BALD derivatives.

193. It can therefore be concluded the envisaged transaction does not significantly impede effective competition in the markets for BALD derivatives.

C. COORDINATED EFFECTS

194. The notifying party submits that there are no risks of coordinated effects arising from the envisaged transaction.

195. As it is well established by the case law of the General Court[58], there are four cumulative conditions that must be satisfied in order for coordinated effects to arise post-transaction: (i) there must be easily recognisable terms of coordination for coordination to take place, and there must be a credible and economically rational coordination mechanism; (ii) there must be efficient 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; (iii) there must be means for other oligopoly members to retaliate against any departures from the common policies, so that members have an incentive not to depart from the common policy; and (iv) the foreseeable reaction of current and future competitors, as well as consumers, would not jeopardise the results expected from the common policy.

196. The notifying party argues that the markets concerned by the envisaged transaction are not currently subject to coordination and considers that the situation post-completion of the proposed transaction will not be any different.

58 Case T-349/95, *Airtours plc v Commission*; Case T-464/04, *Impala v Commission*.

197. In particular, both Kalama and DSP do not believe that the proposed transaction will alter the current state of the market in such a way as to permit coordination and to meet the four aforesaid cumulative conditions for the reasons stated below.

198. While DSP has a large EEA market position in some of the potential affected markets in the EEA (BA and BALD), the proposed transaction does not change the competitive landscape as Kalama is not active in these markets.

199. On one hand the product markets for BA, NaB, BALD and BALC involve well established players such as Genovique, Lanxess/Gwualior, Tessenderlo, Wuhan and others. On the other hand, customers have the ability to change suppliers with certain flexibility as they do not enter into any exclusive relationship with any particular supplier. The market conditions and demand fluctuate depending on the specific demand of the customers.

200. Any coordination would require the participation of the Chinese producers whose market presence is increasing. The European Commission considered this issue with respect to the market for NaB in the Decision M.5153 –Arsenal / DSP noting that any coordination would require the participation of Chinese suppliers as there are large spare capacities in China.[59] Sales contracts are typically bilateral, so that prices and quantities are not publicly available, contracts are re-negotiated at irregular intervals in a way that limits transparency and the possibility of retaliation, and the terms of discounts applied to individual customers are not uniform across customers. The above contentions have been confirmed by the results of the market investigation.

201. The production of BA, BALD and BALC are typically inter-related, so as to make any attempted retaliation mechanism costly and difficult to implement.

202. Furthermore, as noted above, major customers have significant buyer power and are able to purchase strategically, encourage and sponsor entry and expand or buy rival suppliers so as to disrupt any attempted co-ordination.

203. With respect to downstream products, the proposed transaction will not involve any change to Kalama's market share or supply structure. According to the Non-Horizontal Mergers Guidelines[60,] a vertical merger may make it easier for the firms in the upstream or downstream markets to reach a common understanding on the terms of coordination, for example where the number of effective competitors in the market is reduced or there is an increased degree of symmetry between firms. In the case of the proposed transaction, no effective competitors will be removed on any of the markets for the downstream products and there will be no incentive for Kalama or its competitors in downstream markets to align their conduct.

---

59 See recitals 265–271.

60 Non-Horizontal Mergers Guidelines, at paragraph 25.

204. Moreover, most of the competitors of Kalama for the downstream products are vertically integrated (for example Lanxess/Gwualior and Eastman Chemicals/Genovique) and any attempt at coordination would otherwise damage their business.

205. It follows from the above arguments that the proposed transaction is unlikely to give rise to coordinated affects on the affected markets above discussed.

206. It can therefore be concluded that the envisaged transaction will not significantly impede effective competition in any of those markets through coordinated effects.

VI. CONCLUSION

207. For the above reasons, the European Commission has decided not to oppose the notified operation and to declare it compatible with the internal market and with the EEA Agreement. This decision is adopted in application of Article 6(1)(b) of the Merger Regulation.

For the European Commission,
(signed)
Joaquín ALMUNIA
Vice-President

Table of Content

TABLE OF FIGURES