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***Case No COMP/M.5355 -  
BASF/ CIBA***

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

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ARTICLE 6(1)(b) DECISION IN CONJUNCTION WITH ARTICLE 6(2)  
NON-OPPOSITION  
Date: 12/03/2009

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COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 12.3.2009

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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 Where possible the information omitted has been replaced by ranges of figures or a general description.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 IN  
CONJUNCTION WITH  
ARTICLE 6(2)

**To the notifying party**

Dear Sir/Madam,

**Subject: Case No COMP/M.5355 - BASF/ CIBA  
Notification of 22 January 2009 pursuant to Article 4 of Council  
Regulation No 139/2004<sup>1</sup>**

1. On 22 January 2009, the Commission received a notification of a proposed concentration pursuant to Article 4 of Council Regulation (EC) No 139/2004 (the Merger Regulation") by which BASF SE ("BASF", Germany) acquires within the meaning of Article 3(1)(b) of the Council Regulation control of the whole of CIBA Holding AG ("CIBA", Switzerland) by way of public bid announced on 15.09.2008

**I. THE PARTIES AND THE CONCENTRATION**

2. **BASF**, the ultimate parent company of the BASF Group, is the world's largest chemical company, headquartered in Ludwigshafen, Germany, with activities ranging from chemicals, to crude oil and natural gas. BASF has production sites in 41 countries and more than 95,000 employees.
3. **CIBA**, the ultimate parent company of the CIBA (formerly CIBA Specialty Chemicals) Group, is a specialty chemicals company headquartered in Basel, Switzerland. CIBA is active in more than 120 countries and employs over 13,000 staff worldwide.

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<sup>1</sup> OJ L 24, 29.1.2004 p. 1.

4. The notified transaction consists in BASF's intended acquisition of all of the issued share capital of CIBA and all of the voting rights in CIBA. Following completion of the transaction, BASF will exercise sole control over CIBA.
5. The operation constitutes a concentration within the meaning of Article 3(1)(b) of the ECMR.

## **II. COMMUNITY DIMENSION**

6. The undertakings concerned have a combined aggregate world-wide turnover of more than EUR 5 billion<sup>2</sup> (BASF: € 57,951 million, CIBA: € 3,970 million), and the aggregate Community-wide turnover of each of the parties is more than € 250 million (BASF: € [...] million, CIBA: € [...] million). The parties do not achieve more than two-thirds of their respective aggregate Community-wide turnover within one and the same Member State. The notified operation therefore has a Community dimension.

## **III. COMPETITIVE ASSESSMENT**

7. The transaction concerns a large number of horizontally and vertically affected markets. The main horizontal overlaps between the parties' activities concern the following groups of products: (i) Chemical intermediates, (ii) Synthetic polymer latexes, (iii) Paper chemicals, (iv) Colourants, (v) Plastics and coatings additives, and (vi) UV filters. In addition, BASF has identified numerous actual or potential vertical relationships.

### **A. Horizontal overlaps**

#### **1. CHEMICAL INTERMEDIATES**

8. Chemical intermediates are substances produced during the conversion of a reactant into a product. The transaction affects the production and sale of dimethylaminoethyl acrylate ("DMA3"), diallyldimethylammonium chloride (DADMAC), polyacrylamide ("PAM") and polyacrylic acid ("PAA"). Apart from that, the transaction leads to overlaps in activities for poly-DADMAC and acrylate monomers which however, do not bring about market shares leading to affected markets.

##### **1.1. DMA3**

###### *Relevant product market*

9. Dimethylaminoethyl acrylate, so-called "DMA3", is a chemical intermediate which is produced from the acrylate esters methyl acrylate, or ethyl acrylate and dimethylaminoethanol by transesterification. DMA3 is nearly always subject to quaternisation<sup>3</sup> into DMA3 quart. for use as a co-monomer in the production of PAM.

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<sup>2</sup> Turnover calculated in accordance with Article 5(1) of the Merger Regulation and the Commission Notice on the calculation of turnover (OJ C66, 2.3.1998, p.25)

<sup>3</sup> BASF estimates that approximately [90-100] % of DMA3 is quaternised.

PAM is used in the water treatment and paper industries (in retention and drainage agents). To a minor extent, DMA3 is used directly as specialty monomer.

10. BASF submits that DMA3 and DMA3 quat. form distinct product markets as they would have different chemical compositions, product characteristics and since quaternisation would require additional costly production facilities.
11. The Commission has not yet assessed DMA3 or DMA3 quat. in previous decisions. The market investigation confirms that DMA3 and DMA3 quat. have different product characteristics and are therefore not interchangeable from a customers' perspective. Also, the market investigation confirmed that quaternisation requires additional equipment and that suppliers of DMA3 cannot easily switch production to DMA3 quat. The Commission therefore concludes that the market for DMA3 does not comprise DMA3 quat.

#### *Relevant geographic market*

12. BASF submits that the geographic market for DMA3 is worldwide or alternatively consists of the EEA and NAFTA. More than [10-20] % of the DMA3 traded in the EEA would be imported by CIBA from the United States. and the worldwide DMA3 production could be traded inter-continentially. Prices for DMA3 would be linked to raw material prices and would be comparable across the EEA. Also, prices would not differ by more than [20-30] % between regions such as China and NAFTA.
13. The results of the market investigation point towards an EEA-wide market for DMA3. First of all, it should be noted that BASF sells DMA3 it produces in Ludwigshafen, Germany, only in the EEA. In addition, the market investigation indicates that the EEA is the most important market place for DMA3 sold on the merchant market in the EEA. Almost all 'worldwide' sales of the producers located the EEA result from sales made in the EEA There are some imports of DMA3 into the EEA from the United States but the vast majority of DMA3 sourced by EEA customers is sourced within the EEA Also, the market investigation indicates that prices differ substantially between different regions of the world in part due to variations of exchange rates. Based on this, the Commission considers it likely that the geographic market is limited to the EEA. However, the precise geographic market definition for DMA3 can be left open since the proposed commitments remove the competition concerns in the EEA and worldwide.

#### *Assessment*

14. Both parties manufacture DMA3. However, unlike CIBA which is forward integrated in quaternising DMA3, BASF does not have quaternisation facilities and none of BASF's production is used captively. By contrast, the DMA3 produced by CIBA is almost all used captively for quaternisation. CIBA's excess capacity of DMA3 is sold to the merchant market. Such sales account for ca. [10-20] % of CIBA's DMA3 production.
15. BASF produces DMA3 in [...] Ciba's production sites for DMA3 are in [...] and [...].
16. BASF estimates the market size, its own market shares and those of its competitors as follows:

## Sales and market shares for DMA3 (2007 figures)

DMA 3 (2007 figures)				
Suppliers	WW sales (€ million)	WW market share (%)	EEA sales (€ million)	EEA market share (%)
BASF	[...]	[10-20]	[...]	[20-30]
Ciba	[...]	[5-10]	[...]	[0-5]
<b>Combined</b>	<b>[...]</b>	<b>[20-30]</b>	<b>[...]</b>	<b>[30-40]</b>
Arkema	[...]	[40-50]	[...]	[60-70]
Toagosei	[...]	[10-20]	[...]	[0-5]
3F Chimica	[...]	[0-5]	[...]	[0-5]
SNF Floerger	[...]	[10-20]	[...]	[0-5]
Zibo Wandufou	[...]	[0-5]	[...]	[0-5]
<i>Total</i>	<i>119</i>	<i>100</i>	<i>76</i>	<i>100</i>
<i>(Figures may not add up due to rounding)</i>				

Source: BASF and Ciba actual sales. Market volumes and competitor data: BASF and Ciba best estimates.

17. BASF states that the most important customers for DMA3 are DMA3 quat. producers who are either not backward integrated or need to supplement their own DMA3 production with purchases from third parties. BASF is not active in the production of DMA3 quat. Ciba only uses captive DMA3.
18. BASF considers that the transaction would not lead to competition concerns in the market for DMA3. BASF's and Ciba's combined market share would be moderate and the merged entity would be constrained by the much larger competitor Arkema. Also, the majority of DMA3 produced would be for captive use. In addition, Ciba's activities in the DMA3 merchant market would be limited and this would not change after the merger since Ciba would already be running at [...] % capacity. BASF would be running at [...] % capacity. Arkema would have spare capacities available and could render any price increase impossible by utilising its spare capacity and other players would be able to shift production to sell more of their output to the merchant market. For certain applications, DMA3 could be replaced by DMAEMA and DMAPMA, so that customers could counterbalance any price increase by using these products.
19. The Commission's market investigation indicated that the market structure as assumed by BASF and described in the table is not correct. The competitor Toagosei (Japan) does not have any sales in the EEA and sells DMA3 only in Japan. Also, the Italian DMA3 producer 3F Chimica does not sell DMA3 on the merchant market. In consequence, the only producers selling DMA3 on the merchant market in the EEA are Arkema, BASF and Ciba. The concentration thus leads to a reduction of three to two players on the merchant market for DMA3. Indeed, in the market investigation customers expressed concerns about the fact that post merger they would be left with only two suppliers: BASF and Arkema
20. At a worldwide level the only significant additional producer is SNF Floerger with production facilities in the United States Concerning Toagosei it has to be noted that the sales of DMA3 are limited to Japan. In addition, it has to be taken into account that most of the worldwide sales of the European producers consist of sales made in the EEA.
21. The Commission considers it unlikely that in the market situation post-merger where only Arkema and the merged entity would remain as suppliers the latter would be prevented from raising prices, even if Arkema would have spare capacity. In fact,

BASF/Ciba and even more so Arkema (as the supplier with the higher market share) would both benefit from higher prices and the Commission does not have indications that there could be constraints from other producers of DMA3. As concerns DMAEMA<sup>4</sup> and DMAPMA<sup>5</sup>, although these can be used to replace DMA3 in some applications. This partial substitutability is unlikely to provide a significant constraint. In view of this, the transaction raises serious doubts as to its compatibility with the common market for the EEA market for DMA3.

*Commitments submitted by BASF*

22. On 19 February 2009, BASF submitted commitments to address the concerns that the concentration would significantly impede competition on the DMA3 market and in particular that BASF may be able to unilaterally raise the price of DMA3 post-merger. BASF proposed to divest its DMA3 production assets at [...]. Under the proposed divestment, BASF would continue to operate the DMA3 plant at [...] on behalf of the purchaser under co-siting (and related service) agreements to ensure the continued safe and reliable operation of the relevant DMA3 production assets. [...], BASF stated that it is also willing to offer the purchaser either a long-term supply contract or a swap arrangement for the supply of raw materials (e.g. DMAE) needed to produce DMA3.
23. BASF considers that the proposed divestment eliminates the parties' overlap in DMA3 and thus is suitable to remove any significant impediment to effective competition.
24. The Commission has market tested the proposed commitment with competitors and customers in order to evaluate its ability to restore effective competition in the market for DMA3. In the market investigation several respondents expressed concerns about the viability of the divested business. The reasons for such concerns have been twofold. Firstly, the purchaser of the DMA3 business will rely on BASF for input products to be supplied by BASF. Secondly, the production assets to be divested by BASF will remain fully integrated in BASF's production site in [...] and will be operated by BASF on behalf of the purchaser. Such an arrangement could undermine the purchaser's ability to compete effectively on the DMA3 market.
25. With regard to the concern that the purchaser will be dependent on the merged entity for the supply of inputs, BASF addressed this issue in its remedies proposal by offering long-term supply arrangements with prices linked to market prices or a swap agreement for raw materials, i.e. [...]. Furthermore, the long-term agreement pursuant to which BASF will operate the DMA3 production assets for the purchaser is in accordance with standard industry terms and follows a common practice in the production of chemicals. The Commission considers that the above-mentioned arrangements ensure a supply of raw material at competitive prices and the creation of a viable alternative supplier in the DMA3 market.
26. In view of the fact that the proposed divestment removes the overlap resulting from the concentration and the fact that the foreseen supply arrangements will ensure the viability of the divestment business, the Commission considers the commitment concerning the DMA3 business sufficient to remove the competition concerns on this market.

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<sup>4</sup> DMAEMA, dimethylaminoethyl methyl acrylate.

<sup>5</sup> DMAPMA, dimethylaminopropyl methylacrylamide.

## 1.2. DADMAC and Poly-DADMAC

### *Relevant product market*

27. DADMAC is a cationic ammonium monomer. It is used in the production of organic coagulant for water treatment. BASF submits that it is nearly always polymerised to form Poly-DADMAC. Poly-DADMAC is a quaternary ammonium polymer which is used for various applications including personal care and paper chemical products, textiles, adhesives or mineral recovery. The main use of Poly-DADMAC is in water treatment.
28. BASF submits that DADMAC and Poly-DADMAC should be considered as two distinct product markets, owing to their different chemistries and the polymerisation step required. No further segmentation would be required as both DADMAC and Poly-DADMAC are homogeneous products.
29. The Commission's market investigation supports BASF's view in that DADMAC and Poly-DADMAC have different product characteristics and applications and are therefore not interchangeable for customers. The market investigation indicates that producers cannot easily switch production between the two products. However, the precise product market definition can be left open since the transaction will not lead to competition concerns under any of the potential product market definitions.

### *Relevant geographic market*

30. BASF considers that the geographic market for DADMAC is worldwide but that it would be at least EEA wide. With the exception of BASF, all market players in the EEA merchant market produce their DADMAC in the United States from where it is exported in bulk for polymerisation. Concerning poly-DADMAC, BASF submits that the geographic market is EEA-wide. Through the polymerisation process the volume of the product would be increased and therefore costs of transport would be higher than for DADMAC.
31. The geographic scope of the market(s) can be left open, since the transaction will not lead to competition concerns under any market definition.

### *Assessment*

32. BASF did not sell any DADMAC in the EEA and ceased selling DADMAC completely in 2008. In 2007 it had sales of ca. [below EUR 1 million] to a South African company. These sales stopped in 2008.
33. BASF estimates that its sales in the year 2007 translated into a market share of [0-5] % on a worldwide level. Ciba's market share worldwide is estimated at [40-50] %. The market size of a worldwide market for DADMAC in 2007 is estimated to be EUR 10.15 million.
34. In the Commission's market investigation none of the respondents expressed concerns about a potential negative impact for DADMAC resulting from the proposed concentration.
35. In view of the fact that in 2008 BASF stopped selling DADMAC to the merchant market and since no substantiated concerns were raised during the market

investigation, the Commission concludes that the transaction does not give rise to competition concerns in relation to DADMAC.

36. Concerning Poly DADMAC, both parties are active in the production and sale of this product. Within the EEA the estimated combined market share is [5-10] % and on a worldwide level the market share is estimated at [10-20] % with a small increment stemming from BASF. Many competitors with higher market shares than the parties are active on the market for Poly-DADMAC. In view of this, the transaction does not raise serious doubts for the market for Poly-DADMAC.

### **1.3. PAM**

#### *Relevant product market*

37. Polyacrylamide (“PAM”) is a water soluble polymer which can be anionic, cationic or non ionic. It has a medium to high molecular weight and is used to flocculate solids in solutions containing organic and inorganic chemical substances. PAM is produced as liquid, powder or emulsion. It is mainly used as an input chemical in the manufacture of waste water products or water treatment products, for paper manufacturing and for mineral processing.
38. BASF submits that PAM forms a relevant product market and that no further distinctions for different types of PAM are required. All PAM products would have the same functionality to act as a flocculent even though some PAM grades are more suitable for specific uses. Also, all PAM products would be interchangeable on the supply-side.
39. The market investigation indicates that PAM is a differentiated product with a large variety of different polymers. In particular, distinctions can be made between PAM in aqueous form, in powder form or as an emulsion. However, the major producers of PAM are capable of producing the various types of PAM. In any event, the precise product market definition can be left open since the concentration will not raise serious doubts under any product market definition.

#### *Relevant geographic market*

40. BASF considers that the geographic market for PAM is the EEA. Customers and suppliers would regularly pursue a pan-European supply and sourcing strategy and prices would be uniform all over the EEA.
41. The market investigation indicates that customers purchase PAM throughout the EEA. However, the market investigation further indicates that transport costs vary for different types of PAM. The transport of liquid PAM is most expensive. In addition prices seem to vary considerably within the EEA.
42. The precise geographic market definition can be left open since the transaction will not lead to concerns under any reasonable market definition.

#### *Assessment*

43. BASF does not produce PAM. It is active only as a reseller of supplies sourced from SNF Floerger and Kemira. In the EEA, BASF has an estimated market share of [0-5] % for the (re-)sale of PAM. Ciba's estimated market share in the EEA is [30-40] % leading to a combined market share of [30-40] %. The most important competitors in the EEA are SNF



Floerger with an estimated market share of [20-30] %, Ashland ([10-20] %), Nalco ([5-10] %) and Kemira ([5-10] %). The market structure for an overall market for PAM is estimated and summarized by BASF as follows:

*Sales and market shares for PAM (2007 figures)*

<b>PAM (2007 figures)</b>				
<b>Suppliers</b>	<b>WW sales (€ million)</b>	<b>WW market share (%)</b>	<b>EEA sales (€ million)</b>	<b>EEA market share (%)</b>
BASF	[...]	[0-5]	[...]	[0-5]
Ciba	[...]	[20-30]	[...]	[30-40]
<b>Combined</b>	[...]	<b>[20-30]</b>	[...]	<b>[30-40]</b>
SNF Floerger	[...]	[20-30]	[...]	[20-30]
Nalco	[...]	[5-10]	[...]	[5-10]
Ashland	[...]	[5-10]	[...]	[10-20]
Kemira	[...]	[5-10]	[...]	[5-10]
Others	[...]	[30-40]	[...]	[5-10]
<i>Total</i>	<i>2004</i>	<i>100</i>	<i>566</i>	<i>100</i>
<i>(Figures may not add up due to rounding)</i>				

Source: BASF and Ciba actual sales. Market volumes and competitor data: BASF and Ciba best estimates.

44. BASF considers that the transaction will not appreciably alter the competitive situation prevailing on this market. Moreover, there is spare capacity in the market, and some competitors have initiated projects to increase capacity.
45. Concerning the potential product differentiations, BASF submits that Ciba is not active in the sale of aqueous PAM. BASF is active only as a reseller with very small volumes of sales ([below 1kt] in total). For PAM in powder or in emulsion form and based on potential national markets the transaction will lead to overlaps only in a limited number of countries due to the limited presence of BASF.<sup>6</sup>
46. In the market investigation no substantiated concerns were raised. It was stated that the impact of the transaction will be limited due to the fact that BASF is active only as a reseller of PAM.
47. In view of the results of the market investigation and the fact that BASF is only active as a reseller of products from SNF Floerger and Kemiras who themselves are active within the EEA, the Commission concludes that the concentration will not lead to a significant impediment of effective competition on any of the potential markets for PAM in the EEA or EEA countries and therefore does not raise serious doubts as to its compatibility with the Common market.

#### **1.4. PAA**

*Relevant product and geographic market*

48. Polyacrylic Acid (“PAA”) is a water soluble polymer used as an input chemical in the manufacture of the following products: washing detergents, concrete additives, water

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<sup>6</sup> At a national level, the transaction leads to an overlap in the following countries: Austria (combined market share: [20-30]%, overlap: [0-5] %), Belgium (combined market share: [40-50] %, overlap: [10-20]%), Finland (combined market share: [30-40]%, overlap: [0-5]%), France (combined market share: [30-40] %, overlap: [0-5] %), and Germany ([40-50] %, overlap: [10-20] %).

treatment, dispersants, thickening agents for paints and coatings, binding/sizing agents e.g. for textiles. PAA is used in aqueous or in powder form.

49. BASF considers that PAA represents a relevant product market. No distinction would be required as to the production process of PAA or its intended use since PAA would be a homogeneous product and could be substituted irrespective of its intended use and forms.
50. Concerning the scope of the geographic market for PAA, BASF considers that the market is EEA-wide, as [90-100] % of PAA is transported in aqueous solutions. Prices across the EEA vary depending on the distance from the production facilities due to cost of transport. However, PAA is sold and purchased on an EEA-wide basis under homogenous competitive conditions within this territory. The parties and their competitors supply customers all over the EEA from a limited number of plants.
51. The precise product market definition for PAA can be left open since the transaction will not raise serious doubts under any potential market definition. The Commission considers that the relevant geographic market is no wider than and most likely is the EEA. However, as the transaction will not raise serious doubts on any national markets, the geographic market definition may be left open.

#### *Assessment*

52. BASF submits that the transaction will not lead to a significant impediment to effective competition in the field of PAA due to the moderate combined market shares and the fact that many competitors remain active on the market. BASF estimates the market structure as follows:

#### *Sales and market shares for PAA (2007 figures)*

<b>PAA (2007 figures)</b>				
<b>Suppliers</b>	<b>WW sales (€ million)</b>	<b>WW market share (%)</b>	<b>EEA sales (€ million)</b>	<b>EEA market share (%)</b>
BASF	[...]	[10-20]	[...]	[20-30]
Ciba	[...]	[0-5]	[...]	[0-5]
<b>Combined</b>	[...]	<b>[10-20]</b>	[...]	<b>[20-30]</b>
Rohm & Haas	[...]	[20-30]	[...]	[10-20]
Nalco	[...]	[5-10]	[...]	[0-5]
Arkema	[...]	[5-10]	[...]	[10-20]
SNF Floerger	[...]	[5-10]	[...]	[0-5]
Protex	[...]	[5-10]	[...]	[0-5]
Mare Group	[...]	[0-5]	[...]	[5-10]
Zeolite Mira	[...]	[0-5]	[...]	[5-10]
Nippon Shokubai	[...]	[0-5]	[...]	[0-5]
Others	[...]	[10-20]	[...]	[10-20]
<i>Total</i>	<i>893</i>	<i>100</i>	<i>451</i>	<i>100</i>
<i>(Figures may not add up due to rounding)</i>				

*Source: BASF and Ciba actual sales. Market volumes and competitor data: BASF and Ciba best estimates.*

53. Concerning potential submarkets for PAA in aqueous or powder form, BASF submits that there is no overlap for PAA in powder form as only BASF is active in this field. For aqueous PAA the parties produce at a limited number of sites and deliver over

considerable distances. From an analysis of the parties' market shares in individual Member States it appears that there are, in some cases, elevated market shares. However, in almost all cases the increment is small and in all countries there are several alternative actual or potential suppliers.

54. During the market investigation, the Commission did not encounter any expressions of concern with regard to PAA. Due to the moderate combined market shares for PAA in the EEA and the fact that there are many viable competitors active and selling in all EEA countries the Commission concludes that the concentration does not raise serious doubts as to its compatibility with the common market with regard to PAA.

## **2. PAPER CHEMICALS**

55. Paper chemicals are used in the paper industry and serve to reduce consumption of water, energy, raw materials and increase the use of recycled paper without sacrificing the functional or optical properties of the paper. Both parties are active in (i) dry strength agents, (ii) RDAs, (iii) fixatives and (iv) AKD internal sizing agents.

### **2.1. Relevant product markets**

#### *Dry strength agents*

56. Dry strength agents (also called dry strength additives) are substances used in paper manufacture to increase fold and tensile burst strength by enhancing the bonding between fibres. They are to be distinguished from wet strength agents. Within dry strength agents, there is a distinction between synthetic dry strength agents, dry strength agents based on starches and semi-synthetic products, i.e. highly cationised, modified starches.
57. BASF submits that the market should be defined as covering all dry strength additives used in the paper industry and claims that it would be erroneous to define separate markets for synthetic dry strength<sup>7</sup> agents and dry strength agents based on starches, since these products are highly interchangeable. In that regard, BASF claims that paper manufacturers of starch-based products can easily switch to synthetic dry strength products and vice versa, since switching costs are very low and switching trials only take from one to seven days.
58. In a previous decision the Commission considered that all dry strength agents might be considered as a single product market, but ultimately left open the question of whether the market could be further sub-divided.<sup>8</sup> However, the market investigation clearly pointed to the fact that a product market definition limited to synthetic dry strength agents should be considered. The majority of the respondents stated that there is no demand or supply-side substitutability between synthetic dry strength agents and dry strength agents based on starches.

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<sup>7</sup> Including semi-synthetic dry strength agents, which are based on starch, but have been modified to perform some of the characteristics of synthetic products.

<sup>8</sup> Case No. COMP/M.5327 – Ashland/Hercules.

59. In the light of the above findings, the Commission considers that, for purposes of this decision, the relevant product markets should be the followings: (a) dry strength agents based on starches and (b) synthetic dry strength agents.

#### *RDAs*

60. Retention and drainage aids ("RDAs") are added to the pulp slurry at the wet end of the papermaking process and used to maximise the retention of fines, fibres and other additives and to improve the removal of water.
61. According to BASF, these agents constitute a distinct product market due to a high degree of demand-side and supply-side substitutability between different types of RDAs utilised for all kinds of paper grades. In previous decisions the Commission considered RDAs as a distinct product market but in the end left the product market definition open<sup>9</sup>.
62. Nevertheless, a further sub-segmentation of the RDAs market could be made, encompassing three different categories of RDAs: (i) polymers, such as PAM, PEI and PVAm; (ii) dual/multicomponent systems; and (iii) inorganic micro particles, such as silica or bentonites.
63. In any case, the exact market definition can be left open in the present case, since regardless of the market definition, no competition concerns would arise as a result of the transaction.

#### *Fixatives*

64. Fixatives are added to the paper to remove interfering substances by fixing them to cellulose fibres or fillers. They are highly cationic polymers (including PAM, PEI, PVAm, Poly-DADMAC) and inorganic chemicals (such as Alum).
65. Although the Commission<sup>10</sup> has previously concluded that contaminant or deposit control agents<sup>11</sup>, encompassing fixatives, constitute a single relevant product market, BASF considers fixatives to be a distinct product market from other contaminant control agents. BASF states that from a demand-side perspective, there is a high degree of substitutability between the chemicals used as fixatives. As well, from a supply-side perspective, manufacturers of polymers could easily switch to selling them into the fixatives market without incurring significant additional costs.
66. However, the precise market definition can be left open in this case, since no competition concerns arise under any of the alternative market definitions.

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<sup>9</sup> Case No. COMP/M.5327 – Ashland/Hercules; case No. IV/M.1304 – Hercules/BetzDearborn.

<sup>10</sup> Case No. COMP/M.5327 – Ashland/Hercules.

<sup>11</sup> Contaminant control agents are a range of products used to prevent contamination during the paper manufacturing process, regardless of the chemistry used. Fixation is only one of several chemical methods applied to solve this problem.

### *Sizing agents*

67. Sizing agents are used on fibres during paper manufacture in order to curb their tendency to absorb liquids. The Commission in its previous decisions<sup>12</sup> has indicated that sizing agents could be further segmented into internal and surface agents and that within the segment of internal agents, a delineation could be made between AKD, ASA and rosin sizes, but ultimately left the market definition open.
68. In line with previous Commission decisions, BASF submits that internal and surface sizing agents do not belong to the same product market and that AKD, AA and rosin sizes constitute separate product markets within the segment of internal sizing agents. In addition, as regards surface sizing agents, BASF alleges that this market cannot be segmented further as there is a high degree of substitutability between the chemicals used as surface sizing agents.
69. It is, however, not necessary to delineate the relevant product markets for the purpose of this decision, since under all alternative market definitions, no competition concerns would arise as a result of the transaction.

### **2.2. Relevant geographic markets**

70. BASF defines the geographic market as being EEA-wide for all the paper chemicals mentioned above due to comparable price levels across EEA. In turn, in previous decisions the Commission considered the markets for sizing agents<sup>13</sup> and RDAs<sup>14</sup> as being, at least, pan-European. Regarding fixatives, prior Commission decisions defined EEA-wide markets<sup>15</sup> but ultimately left the geographic market definition open.
71. In the case of dry strength agents, the market investigation indicates that the market is likely to be EEA wide, and at least not narrower than the EEA, although the replies are not fully conclusive. In particular, the indications are that there are no national markets within the EEA, since the same customers are present in several Member States, transportation costs are not high, prices are similar and there are no specific regulations at a national level in the EEA. Moreover, it appears that these features would equally apply to all paper chemical markets mentioned above.
72. As a conclusion, the geographic scope for RDAs, fixatives and sizing agents is likely to be, at least, EEA wide. However, for the purposes of the present decision, the precise definition of the relevant geographic markets can be left open since the proposed transaction does not give rise to any competition concerns under any reasonable alternative market definition.
73. In a previous decision<sup>16</sup> the Commission considered that the relevant geographic market for dry strength agents could be the EEA. In this case the market investigation revealed

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<sup>12</sup> Case No. IV/M.1304 – Hercules/BetzDearborn, Case No COMP/M.3424 - CIBA / RAISIO CHEMICALS

<sup>13</sup> Case No. IV/M.1304 – Hercules/BetzDearborn.

<sup>14</sup> Case No. IV/M.1304 – Hercules/BetzDearborn. Case No. COM/M.1631, Suez-Lyonnaise / Nalco

<sup>15</sup> Case No. COMP/M.5327 – Ashland/Hercules.

<sup>16</sup> Case No. COMP/M.5327 – Ashland/Hercules

that there are significant price differences (up to 50%) between the EEA and other parts of the world, as well as different regulations and customer needs.

### 2.3. Competitive assessment

#### *Dry strength agents*

74. On the market for all dry strength agents, the Parties' combined market share would be [5-10] % on an EEA level and [0-5] % worldwide, with several strong competitors present in the market: Cargill ([30-40] % EEA and [20-30] % worldwide), Roquette ([20-30] % EEA and [10-20] % worldwide) and Tate&Lyle ([10-20] % EEA and [10-20] % worldwide), among others.
75. However, if the market is sub-divided into synthetic dry strength agents and dry strength agents based on starches, the Parties' combined market share would be significant in the market for synthetic dry strength agents, whilst in the market for dry strength agents based on starches, they would not overlap, since BASF is not active in the starch-based segment of the market.

**Table: Sales and market figures for synthetic dry strength agents (2007 figures)**

Synthetic dry strength agents (2007 figures)				
Suppliers	WW sales (€ million)	WW market share (%)	EEA sales (€ million)	EEA market share (%)
<b>BASF</b>	[...]	<b>[5-10]</b>	[...]	<b>[40-50]</b>
<b>Ciba</b>	[...]	<b>[0-5]</b>	[...]	<b>[10-20]</b>
Combined	[...]	[10-20]	[...]	[50-60]
<b>Ashland / Hercules</b>	[...]	<b>[40-50]</b>	[...]	<b>[10-20]</b>
<b>Kemira</b>	[...]	<b>[10-20]</b>	[...]	<b>[5-10]</b>
<b>Others</b>	[...]	<b>[40-50]</b>	[...]	<b>[10-20]</b>
<b>Total</b>	<b>237</b>	<b>100</b>	<b>25</b>	<b>100</b>

*(Figures may not add up due to rounding)*

Source: BASF and Ciba actual sales. Market volumes and competitors data: BASF and Ciba best estimates.

76. As shown in the table, in the market for synthetic dry strength agents BASF would hold a market share of [40-50] % and Ciba [10-20] % on an EEA level, which would lead to a combined market share of [50-60] % in the EEA. At worldwide level the Parties combined market share would be much lower ([10-20] %).
77. BASF argues that even on an EEA level, the transaction raises no competition concerns, as there are other competitors in this market, such as Ashland/Hercules ([10-20] % EEA, [40-50] % worldwide) and Kemira ([5-10] % EEA, [10-20] % worldwide). In support of their claim, they point to the fact that the market for dry strength agents is a small emerging market (EEA sales: 25 mln €; worldwide sales: 237 mln €) that is growing and highly innovative. Hence, the Parties' market position would be of a transitory nature. For the same reason, there would be no risk of coordinated effects.
78. Regarding these arguments, the market investigation did not support the BASF's view that their market position would be transitory. On the contrary, some third parties

voiced concern that the transaction would limit alternative supplies in the EEA market, and therefore, would reinforce the dominant position of the parties. As well, some respondents underlined that the merged entity would be able to increase prices in the downstream market, since there are no other strong competitors in the market that could be a competitive constraint on BASF/Ciba.

79. Given the strong position of the merged entity in the market for synthetic dry strength agents, as well as the negative reaction of third parties during the market investigation, the Commission considers the transaction raises serious doubts as to its compatibility with the common market in relation to synthetic dry strength agents in the EEA.

*Commitments submitted by BASF*

80. On 19 February 2009, BASF submitted commitments to resolve the concerns identified by the Commission in the market for dry strength agents. In that regard, BASF proposed to divest Ciba's entire EEA SDA business. This includes, in particular, the transfer of the Kaipianien production assets, production vessels, tanks, inventories, the production know how and IP, the transfer of customer lists, the transfer of marketing personnel and entering into a toll manufacturing agreement for the semi-synthetic dry strength products produced [...] at Kaipiainen<sup>17</sup>. In that regard, BASF commits to offer the products [...] to the acquirer on a toll manufacturing basis. Thus, the acquirer would have the complete range of dry strength agents produced in Kaipiainen. The commitments also include a toll manufacturing agreement with the purchaser for the synthetic dry strength product [...] produced at [...], and the transfer of a toll manufacturing agreement for this product that was already toll manufactured for CIBA.
81. BASF considers that the proposed divestment eliminates the parties overlap in dry strength agents and thus is suitable to remove any significant impediment to effective competition.
82. The Commission has market tested the proposed commitment with competitors and customers in order to evaluate its ability to restore effective competition in the market for dry strength agents. The overwhelming majority of the respondents considered the proposed divestiture to be a viable business.
83. In view of the fact that the proposed divestment removes the overlap resulting from the concentration in the market for dry strength agents, and the fact that the divestment business appears to be viable, the Commission considers the commitment to be sufficient to remove the serious doubts on this market.

*RDAs*

84. As shown in the table below, the Parties' combined market shares do not amount to more than [30-40] % neither on an EEA ([20-30] %), nor on a worldwide level ([10-20] %). In addition, there are other significant competitors present in the RDAs' market: Nalco ([10-20]% EEA, [10-20]% worldwide), Eka ([10-20] % EEA, [5-10] % worldwide), Ashland/Hercules ([5-10] % EEA, [5-10] % worldwide), Cargill ([5-10] % EEA, [5-10] % worldwide), Kemira ([5-10] % EEA, [0-5] % worldwide). In turn, if a

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<sup>17</sup> [...].

narrowest market definition would be considered, the Parties overlap would not exceed, in any case, [10-20] %, since BASF's focus on one-component RDA products (PVAm, PAM, PEI) whereas Ciba mainly provides dual and multi component retention systems.

**Table: Sales and market share figures for RDAs (2007 figures)**

RDAs (2007 figures)				
Suppliers	WW sales (€ million)	WW market share (%)	EEA sales (€ million)	EEA market share (%)
BASF	[...]	[5-10]	[...]	[10-20]
Ciba	[...]	[10-20]	[...]	[10-20]
<b>Combined</b>	[...]	<b>[10-20]</b>	[...]	<b>[20-30]</b>
Nalco	[...]	[10-20]	[...]	[10-20]
Eka	[...]	[5-10]	[...]	[10-20]
Kemira	[...]	[0-5]	[...]	[5-10]
Ashland / Hercules	[...]	[5-10]	[...]	[5-10]
Cargill	[...]	[5-10]	[...]	[5-10]
Avebe	[...]	[0-5]	[...]	[5-10]
Tate & Lyle	[...]	[0-5]	[...]	[5-10]
Others	[...]	[30-40]	[...]	[10-20]
<i>Total</i>	<i>982</i>	<i>100</i>	<i>334</i>	<i>100</i>
<i>(Figures may not add up due to rounding)</i>				

*Source: BASF and Ciba actual sales. Market volumes and competitors data: BASF and Ciba best estimates*

85. In addition, BASF raised the following arguments: BASF's and Ciba's products are not close substitutes, since they are specialised in different kinds of retention agents. In that regard, BASF is mainly active in PEI / PVAm products for wood containing paper grades (e.g. packaging, newsprint), while Ciba's PAM products are mainly used in wood free grades (e.g. coated and uncoated fine papers). As well, the Parties follow a different approach in terms of their product offering, since BASF focuses on single component systems (e.g. PEI / PVAm) whereas Ciba provides mainly dual / multi component systems (e.g. Telioform). Thus, the Parties' activities appear to be complementary. Moreover, there is no capacity shortage for the chemicals used as RDAs and competitors could expand their output of chemicals used as RDAs without significant additional costs. Finally, the main customers, paper manufacturers in Europe (such as Stora Enso, UPM-Kymmene, Smurfit Kappa Group, Burgo and Sappi) possess significant countervailing buyer power.
86. In view of the moderate combined market shares of the parties, the fact that several significant competitors are active on the market both at EEA and worldwide level, as well as the existence of customers with elevated buyer power, the Commission considers that the transaction will not lead to a significant impediment of effective competition in the market for RDAs.

*Fixatives*



87. As regards fixatives, the Parties' combined market shares do not exceed [30-40] % in either of the alternative geographic markets ([20-30] % at EEA level and [10-20] % worldwide). As well, there are other strong competitors active in the market, such as Kemira, Nalco or Ashland/Hercules, among others.

**Table: Sales and market shares figures for fixatives (2007 figures)**

Fixatives (2007 figures)				
Suppliers	WW sales (€ million)	WW market share (%)	EEA sales (€ million)	EEA market share (%)
<b>BASF</b>	[...]	[5-10]	[...]	[10-20]
<b>Ciba</b>	[...]	[5-10]	[...]	[10-20]
Combined	[...]	[10-20]	[...]	[20-30]
<b>Nalco</b>	[...]	[10-20]	[...]	[10-20]
<b>Ashland / Hercules</b>	[...]	[10-20]	[...]	[5-10]
<b>Kemira</b>	[...]	[10-20]	[...]	[10-20]
<b>Eka</b>	[...]	[0-5]	[...]	[0-5]
<b>Sachtleben</b>	[...]	[0-5]	[...]	[5-10]
<b>Buckman</b>	[...]	[5-10]	[...]	[0-5]
<b>Montedison</b>	[...]	[0-5]	[...]	[0-5]
<b>Others</b>	[...]	[30-40]	[...]	[20-30]
<b>Total</b>	<b>318</b>	<b>100</b>	<b>80</b>	<b>100</b>
<i>(Figures may not add up due to rounding)</i>				

*Source: BASF and Ciba actual sales. Market volumes and competitors shares: BASF and Ciba best estimates.*

88. BASF stated that the Parties' products are not close substitutes, since they specialise in different fixatives products<sup>18</sup>. Moreover, there would be overcapacity in the market and the main customers, the paper manufacturers in Europe, would hold high countervailing buyer power.
89. BASF further submits from a supply-side perspective that polymer manufacturers could enter into the fixatives market without incurring in significant additional costs.
90. Furthermore, if a broader product market definition, encompassing all contaminant control agents to the paper industry were taken into consideration, the Parties' combined market shares would be even lower. Given these factors and in particular the low combined market shares of the parties, the Commission concludes that the transaction is not likely to lead to a significant impediment of effective competition in the market of fixatives.

### *Sizing agents*

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<sup>18</sup> BASF mainly provides PEI / PVAm products for packaging and wood containing paper. Ciba sells cationic starches, PAM, PAm and poly-DADMAC fixatives that are primarily used for newsprint.

91. With regard to sizing agents, the Parties' activities only overlap in AKD internal sizing agents and surface sizing agents. The market structure of this market is as follows:

**Sales and market share figures for internal sizing agents – AKD (2007 figures)**

Internal sizing agents – AKD (2007 figures)				
Suppliers	WW sales (€ million)	WW market share (%)	EEA sales (€ million)	EEA market share (%)
<b>BASF</b>	[...]	<b>[5-10]</b>	[...]	<b>[10-20]</b>
<b>Ciba</b>	[...]	<b>[0-5]</b>	[...]	<b>[10-20]</b>
Combined	[...]	[10-20]	[...]	[20-30]
<b>Ashland / Hercules</b>	[...]	<b>[20-30]</b>	[...]	<b>[20-30]</b>
<b>Eka</b>	[...]	<b>[10-20]</b>	[...]	<b>[20-30]</b>
<b>Kemira</b>	[...]	<b>[10-20]</b>	[...]	<b>[10-20]</b>
<b>Nalco</b>	[...]	<b>[0-5]</b>	[...]	<b>[0-5]</b>
<b>Others</b>	[...]	<b>[30-40]</b>	[...] <sup>19</sup>	<b>[5-10]</b>
<b>Total</b>	<b>417</b>	<b>100</b>	<b>117</b>	<b>100</b>
<b>(Figures may not add up due to rounding)</b>				

Source: BASF and Ciba actual sales. Market volumes competitors shares: BASF and Ciba best estimates.

92. As shown in the table, the Parties' combined market share is below [30-40] % ([20-30]% EEA and [10-20] % worldwide), and there are other strong competitors present in the market, such as Ashland/Hercules ([20-30] %), Eka ([20-30] %) or Kemira ([10-20]%).
93. In addition to the moderate combined market shares, BASF argues that the entry barriers in the market for AKD are low<sup>20</sup>, that there exists overcapacity in the market and that customers have countervailing buyer power<sup>21</sup>.
94. If a wider market would be considered, encompassing all internal sizing agents (i.e. AKD, ASA and rosin sizes) the Parties' combined market shares would be, in any event, lower than the mentioned above. Thus, also in this case the transaction would not raise competition concerns.
95. As regards the market for surface sizing agents, the Parties' combined market share also remain [20-30] %:

<sup>19</sup> In Europe, many smaller companies are active AKD suppliers. See SRI Consulting, Specialty Paper Chemicals, November 2006, p. 252.

<sup>20</sup> Costs for an AKD emulsification plant are between [below € 10 million].

<sup>21</sup> Paper manufacturers in Europe, such as Stora Enso, UPM-Kymmene, Smurfit Kappa Group, Burgo and Sappi

**Table: Sales and market share figures for surface sizing agents (2007 figures)**

Surface sizing agents (2007 figures)				
Suppliers	WW sales (€ million)	WW market share (%)	EEA sales (€ million)	EEA market share (%)
<b>BASF</b>	[...]	<b>[20-30]</b>	[...]	<b>[20-30]</b>
<b>Ciba</b>	[...]	<b>[0-5]</b>	[...]	<b>[0-5]</b>
Combined	[...]	[20-30]	[...]	[20-30]
<b>BK Giulini</b>	[...]	<b>[5-10]</b>	[...]	<b>[10-20]</b>
<b>Eka</b>	[...]	<b>[5-10]</b>	[...]	<b>[10-20]</b>
<b>Kemira</b>	[...]	<b>[5-10]</b>	[...]	<b>[5-10]</b>
<b>Ashland / Hercules</b>	[...]	<b>[0-5]</b>	[...]	<b>[5-10]</b>
<b>DOW/ R&amp;H<sup>22</sup></b>	[...]	<b>[0-5]</b>	[...]	<b>[5-10]</b>
<b>Clariant</b>	[...]	<b>[0-5]</b>	[...]	<b>[0-5]</b>
<b>Others</b>	[...]	<b>[40-50]</b>	[...]	<b>[10-20]</b>
<b>Total</b>	<b>176</b>	<b>100</b>	<b>53</b>	<b>100</b>
<i>(Figures may not add up due to rounding)</i>				

Source: BASF and Ciba actual sales. Market volumes and competitors data: BASF and Ciba best estimates.

96. Following the transaction, the Parties' would hold a [20-30] % market share in the EEA and [20-30] % worldwide (with an increment of [0-5] % and [0-5] %, respectively). Moreover, there are other competitors present in the market, such as BK Giulini, Eka, DOW/R&H or Ashland/Hercules.
97. Furthermore, and similar to the situation on the AKD market, BASF claims that the entry barriers in the market for surface sizing agents are low<sup>23</sup>, that there is overcapacity in the market and that customers have considerable countervailing buyer power<sup>24</sup>.
98. Given the low combined market shares of the Parties and the existence of strong competitors in the markets for AKD, internal sizing agents and surface sizing agents, the Commission holds the view that the transaction will not lead to a significant impediment of effective competition in these markets.
99. As well, if an overall market for sizing agents would be considered, the Parties' combined market share would be even lower than the figures for each of the sub-markets ., Thus the transaction would not lead to significant impediment of effective competition on such an overall market either.

<sup>22</sup> The Commission has cleared the acquisition of Rohm and Haas Company (R&H) by The Dow Chemical Company ("DOW") on 8 January 2009 (Case M.5424). DOW has announced on 9 March 2009 that it has reached agreements with R&H and certain of its shareholders, which permit DOW to close the acquisition by 1 April 2009. The Commission therefore lists both companies as one combined entity for the purpose of this assessment; even though the result would not change if both were to be considered as separate entities:

<sup>23</sup> Costs for a surface sizing plant (polymerisation reactor and storage tanks) are typically between €5-10 million.

<sup>24</sup> Paper manufacturers in Europe, such as Stora Enso, UPM-Kymmene, Smurfit Kappa Group, Burgo and Sappi.

### 3. COLOURANTS (PIGMENTS AND DYES)

100. The Parties' activities overlap in a number of organic and inorganic pigments (namely bismuth vanadate, lead chromate, perylenes, isoindolines, indanthrone blue and pearlescent pigments) as well as dyes.

#### 3.1. Relevant product markets

##### *Pigments*

101. Organic pigments are chemically synthesized, carbon-based compounds that generate a broad spectral range of brilliant, transparent, or opaque colour shades. Inorganic pigments, on the other hand, are generally based on metal oxides.
102. In previous decisions<sup>25</sup> the Commission identified a separate market for organic and inorganic pigments and emphasized that the market could not be further subdivided since there are no “key pigments”. Moreover, basic pigments are generally interchangeable with respect to their further application<sup>26</sup>.
103. However, based on the industry view, BASF submits that a further delineation by class<sup>27</sup> of pigment could be considered. On this basis, BASF and Ciba overlap in a number of chemical classes, namely: bismuth vanadate and lead chromate (for inorganic pigments) as well as perylenes, indanthrone blue, isoindolines, pearlescent pigments and quinacridone (for organic pigments).
104. The market investigation confirmed that the organic and inorganic pigments should be further segmented by class, since each class of pigment has different chemistry, features, colour, shade and performance, with the effect that the various classes are not interchangeable from either the supply-side or the demand-side point of view.
105. Furthermore, some respondents indicated that certain pigments cannot be used in all applications. Therefore, a further sub-division by application could be taken into account. In that regard, the respondents to the market investigation mentioned the following categories for pigment applications: (i) coating applications (ii) plastic applications and (ii) other applications, including, inter alia, textile and inks applications.
106. Furthermore, and in line with previous Commission decisions<sup>28</sup>, within a broader coatings market, a basic distinction can be drawn between automotive coating applications, industrial coatings and decorative coatings.

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<sup>25</sup> Case No. COMP/M.4102 – BASF/Engelhard; case No. COMP/M.911 – Clariant/Hoechst.

<sup>26</sup> Case No IV/M.911 Clariant/Hoechst, paras 17-19.

<sup>27</sup> Each class/family of pigments would possess a unique combination of colour shades and distinct properties such as light fastness or brightness that makes it suitable for certain specific applications and uses. Within organic and inorganic pigments, more than 20 pigments classes can be distinguished.

<sup>28</sup> Commission decision of 30/06/1998, COMP/M.1182 – Akzo Nobel/Courtaulds; Commission decision of 05/02/1999, COMP/M.1363 – DuPont/Hoechst/Herberts; Commission decision of 23/02/2006, COMP/M.4102 – BASF/Engelhard; Commission decision of 10/12/2007, COMP/M.4853 – PPG/SigmaKalon.

### *Conclusion on relevant product market*

107. In the light of the above findings, the Commission considers that, in the present case, the following pigment classes constitute different relevant product markets: (i) Bismuth Vanadate<sup>29</sup>, (ii) Lead Chromate<sup>30</sup>, (iii) Perylenes<sup>31</sup>, (iv) Indanthrone Blue<sup>32</sup>, (v) Isoindolines<sup>33</sup>, (vi) Pearlescent pigments<sup>34</sup> and (vii) Quinacridone<sup>35</sup>.
108. As concerns a possible further delineation of the product market by application, it appears unnecessary to define the relevant product market by application as the assessment of the transaction does not change significantly regardless of the product market definition considered (i.e. by pigment class or by pigment application). Thus, the market definition can be left open in this regard.

### *Dyes*

109. Dyes are soluble colorants that usually go through an application process which affects their crystal structure. In general, dyes have a lower light and colour fastness than pigments but are easier to apply to certain products, e.g. fibres, because they are soluble.
110. In accordance with past Commission practice<sup>36</sup>, dyes may be distinguished by chemical class. In this context, chemical class refers to the way the dye is applied to the substrate, for example whether the dyeing takes place in an anionic (acid dye) or cationic (basic dye) environment. BASF submits that this distinction is in conformity with the common industry view on a segmentation of dyes by chemical class into: (i) acid dyes, (ii) basic dyes, (iii) direct dyes, (iv) solvent dyes, (v) disperse dyes, (vi) mordant dyes, (vii) reactive dyes and (viii) vat dyes.
111. In addition to the above mentioned market segmentation, in a previous decision<sup>37</sup> the Commission has also considered a product market definition by end-use or application. From this perspective, the Parties' activities would overlap in dyes for paper, plastics, coatings, inks and home and personal care.

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<sup>29</sup> Bismuth vanadate pigments feature a brilliant yellow with a green tint. The main application of bismuth vanadate is paints, coatings and plastics.

<sup>30</sup> Lead Chromate pigments feature a yellow and orange colour.

<sup>31</sup> Perylenes are red colour pigments that provide excellent chemical resistance and superior light fastness. Perylene pigments are particularly but not exclusively used in exterior automotive coatings.

<sup>32</sup> Indanthrone Blue is a pigment that can be used in a range of media such as acrylic and watercolour paints. Indanthrone blue gives a blue with a tinge of red.

<sup>33</sup> Isoindolines are yellow-orange pigments with good tinctorial strength and good fastness properties but which do not resist to alkalis. They are mainly used in higher quality industrial finishes.

<sup>34</sup> Pearlescent pigments are semitransparent and allow some light to pass through their surface and absorb and scatter light as well. The main applications are paints, inks, plastics and cosmetics.

<sup>35</sup> Quinacridones are a class of organic pigments varying from beige to violet. They are characterised by high weatherfastness, high heat stability and good migration resistance. Typical applications of quinacridone are coatings, plastics and inks.

<sup>36</sup> Case No. COMP/M.4179 – Huntsman/Ciba TE Business, para. 26. See also Commission decision in Case No. COMP/ M. 1987 – BASF / Bayer / Hoechst / Dystar und No. IV/M.534 – Bayer AG / Hoechst AG - JV Textile Dyestuffs.

<sup>37</sup> Case No. COMP/M.911 – Clariant/Hoechst, para. 13.

112. The market investigation confirmed that the market for dyes could be segmented by chemical class, as well as by application. Nevertheless, it is not necessary in this case to take a position on such a segmentation, since regardless of the product market definition considered the transaction would not lead to any concerns. Thus, the market definition for dyes can be left open for the purpose of this decision.

### **3.2. Relevant geographic markets**

#### *Pigments*

113. In a previous decision, the Commission has considered that the markets for organic and inorganic pigments were at least EEA-wide and possibly worldwide<sup>38</sup>.

114. In that sense, BASF submits that the markets for all relevant pigments are worldwide since (i) all main suppliers are active on a worldwide level, (ii) transportation costs are insignificant, generally not exceeding 5% of the value of the product, and (iii) prices are similar throughout the world.

115. The market investigation was not conclusive on whether the geographic scope of the relevant markets should be EEA-wide or worldwide. In the case of bismuth vanadate, however, the market is likely to be EEA-wide, since there are differing regulatory requirements in different regions of the world<sup>39</sup>, prices vary between world regions and some customers revealed that they negotiate separately in different world regions.

116. For indanthrone blue, isoindolines and perylenes pigments, the market investigation pointed towards a worldwide market, since some customers in Europe are supplied from plants outside Europe and several competitors indicated that they face competition from producers outside the EEA.

117. Nevertheless, it is not necessary to conclude whether the geographic market is worldwide or EEA-wide for the above mentioned product markets, since the competition analysis would be the same for both geographic market definitions.

#### *i. Dyes*

118. With regard to dyes, the Commission took the view in earlier decisions that the geographic market was worldwide.<sup>40</sup>

119. BASF states that for all relevant product markets for dyes, the geographic scope is worldwide since (i) all main suppliers are present worldwide, (ii) transportation costs are insignificant, not exceeding 5% of the value of the product on average, and (iii) prices are similar throughout the world.

120. The vast majority of the respondents of the market investigation considered the market for dyes to be worldwide. However, it is not necessary in the present case to take a view on whether the market for dyes could be considered as EEA-wide or worldwide

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<sup>38</sup> Case No. COMP/M.911 – Clariant/Hoechst, para. 24.

<sup>39</sup> e.g. Reach, FDA, CONEG;

<sup>40</sup> Case No. COMP/M.4179 – Huntsman/Ciba TE Business, para. 41, Case No. COMP/M.911 – Clariant/Hoechst, para. 20 et seq.

in scope given that the operation would not result in any significant impediment to effective competition on either of the possible alternative markets.

*Competitive assessment*

121. The parties' activities overlap in the following pigment markets: (i) Bismuth Vanadate (ii) Indanthone Blue (iii) Isoindolines, (iv) Perylenes, (v) Lead Chromate and (vi) Pearlescent pigments.

*Pigments*

*Bismuth Vanadate*

122. With respect to bismuth vanadate, the market structure is as follows:

Table: Bismuth vanadate (2007 figures)

<b>Bismuth vanadate (2007 figures)</b>				
<b>Suppliers</b>	<b>WW sales (€ million)</b>	<b>WW market share (%)</b>	<b>EEA sales (€ million)</b>	<b>EEA market share (%)</b>
BASF	[...]	[20-30]	[...]	[20-30]
Ciba	[...]	[30-40]	[...]	[20-30]
<b>Combined</b>	[...]	<b>[50-60]</b>	[...]	<b>[50-60]</b>
Cappelle Pigments	[...]	[10-20]	[...]	[10-20]
Bruchsaler Farben	[...]	[10-20]	[...]	[10-20]
Heubach	[...]	[0-5]	[...]	[0-5]
Zhejiang Suncom	[...]	[0-5]	-	-
Others	[...]	[20-30]	[...]	[10-20]
<i>Total</i>	<i>78</i>	<i>100</i>	<i>54</i>	<i>100</i>

*(Figures may not add up due to rounding)*

*Source: BASF and Ciba actual sales. Market volumes and competitor data: BASF and Ciba best estimates.*

123. As shown in the above table, the combined market share of the Parties on an EEA level is [50-60] % (BASF [20-30] % and Ciba [20-30] %) and [50-60] % on a worldwide level, with other competitors present in both markets: Cappelle Pigments, Bruchsaler Farben, and Heubach, inter alia.
124. In terms of applications, the Parties' combined market shares following the transaction would be: [40-50]% EEA and [50-60] % worldwide for plastic applications, and [50-60] % EEA and [50-60] % for coating applications worldwide, whilst the combined market share for a further sub-divided automotive coatings market would be even higher ([50-60] % EEA and [60-70] % worldwide). In the remaining applications, the Parties' activities do not overlap.
125. Despite the high market shares post-transaction, BASF argues that the concentration would not harm competition, as it would be possible to increase capacity without

significant costs and time<sup>41</sup>, customers are large companies with countervailing buyer power and a number of pigments or combination of pigments could be used as an alternative to bismuth vanadate<sup>42</sup>.

126. However, the market investigation showed that no sufficient close substitute to bismuth vanadate, which is considered as a specific pigment, exists. In particular it is the only bright yellow mineral pigment that offers high temperature resistance. Some respondents also underlined that switching from the use of bismuth vanadate to another pigment would be prohibitive, since this would require a long qualification process (up to two years) and the incurred costs would be very high. The market investigation did not identify spare capacity in the market. Moreover, some third parties considered that potential entry is unlikely due to high investment costs. Given these factors and the Parties' high combined market shares in the market for bismuth vanadate, the Commission considers the transaction raises serious doubts as to its compatibility with the common market in relation to bismuth vanadate.

*Commitments submitted by BASF*

127. On 19 February 2009, BASF submitted commitments to address the Commission's concerns as regards the market for bismuth vanadate. BASF is prepared to divest Ciba's entire bismuth vanadate business worldwide. In particular, this includes the transfer of all production assets in Ciba's [...] plant, the BV production know-how, the divestment of Ciba's BV customer lists, sales agreements and inventories, and the related Ciba composition patents.
128. BASF considers that the proposed divestment is a viable business and that it eliminates the parties overlap in the market for bismuth vanadate.
129. The Commission has market tested the proposed commitment with competitors and customers in order to evaluate whether the proposed remedy is sufficient to remove any significant impediment to effective competition. In that regard an overwhelming majority of the respondents to the market test agreed that the proposed divestment constitutes a viable business and would remove the competition concerns identified in the market for bismuth vanadate.
130. In view of the fact that the proposed divestment removes the overlap resulting from the concentration and the divestment business appears to be viable, the Commission considers the commitment concerning the bismuth vanadate business sufficient to remove the competition concerns on this market.

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<sup>41</sup> According to the Parties' estimates, all competitors have significant spare capacity. Cappelle and Bruchsaler Farben are estimated to run their facilities at about a [70-80] % to [80-90] % utilisation rate and Heubach even below [50-60] %.

<sup>42</sup> A number of pigments or combination of pigments can be used as an alternative to bismuth vanadate: (a) in coatings, Ni/Cr titanates, azo pigments, benzimidazolone and quinophthalone can substitute bismuth vanadate, depending on the colour, opacity, chemical resistance in each case; (b) in plastics, Ni/Cr titanates, isoindoline, benzimidazolone, azo condensation and disazo pigments that can substitute bismuth vanadate, although not in each and every application.



### *Indanthrone Blue*

131. With regards to indanthrone blue, the combined market share of the Parties on an EEA level would be [40-50] % (BASF [20-30] % and Ciba [20-30] %) and [50-60] % on a worldwide level. However, as shown in the table below, there are a number of competitors present in both markets, such as Heubach ([30-40] % EEA, [20-30] % worldwide), Toyo ([10-20] % EEA, [5-10] % worldwide) and DIC/SUN, among others.

Table: Indanthrone Blue (2007 figures)

<b>Indanthrone Blue (2007 figures)</b>				
<b>Suppliers</b>	<b>WW sales (€ million)</b>	<b>WW market share (%)</b>	<b>EEA sales (€ million)</b>	<b>EEA market share (%)</b>
BASF	[...]	[20-30]	[...]	[20-30]
Ciba	[...]	[30-40]	[...]	[20-30]
<b>Combined</b>	[...]	<b>[50-60]</b>	[...]	<b>[40-50]</b>
Heubach	[...]	[20-30]	[...]	[30-40]
Toyo	[...]	[5-10]	[...]	[10-20]
DIC/SUN	[...]	[0-5]	[...]	[0-5]
Meghmani	[...]	[0-5]	[...]	[0-5]
Others	[...]	[0-5]	[...]	[0-5]
<i>Total</i>	<i>26</i>	<i>100</i>	<i>13</i>	<i>100</i>

*(Figures may not add up due to rounding)*

*Source: BASF and Ciba actual sales. Market volumes and competitor data: BASF and Ciba best estimates.*

132. If product markets by application were taken into account, the activities of the Parties would only overlap in the market for coatings applications. In this market, the Parties' combined market shares would be [40-50] % on an EEA level and [50-60] % on a worldwide level. As well, if the coatings market would be further sub-divided, the Parties' activities would only overlap in the market for automotive coatings, in which they would hold similar market shares: [40-50] % at EEA and [50-60] % worldwide.
133. BASF argues that the transaction will not lead to competition concerns, since their products are not close substitutes (BASF's indanthrone blue pigment has different product properties) and there is significant spare capacity in the market<sup>43</sup>. BASF also submits that the only supplier of indanthren blue RS-J roh, the main input to produce indanthrone blue, will cease production in the near future. As a result, the manufacturing of indanthrone blue will also disappear.
134. However, the market investigation showed that the fact that the raw material, indanthren blue RS-J roh, is not going to disappear from the market and that new suppliers have recently entered the market. Moreover, it seems likely that the Parties will have sufficient indanthren blue RS-J roh available from their current supplier or stock to meet their requirements for at least, [...] years. Additionally, some third parties from the automotive industry indicated that approving any new pigment or new

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<sup>43</sup> BASF stated that Heubach, Toyo, DIC/SUN and Meghmani have spare capacity

supplier takes over 1 year, which means that switching from one supplier to another, or from one pigment to another, has significant costs.

135. Furthermore, the market investigation provided no indications that would confirm BASF's claim that its own and Ciba's indanthrone blues are not close substitutes. Some respondents underlined the fact that the merged entity would easily be able to raise prices in the market. In that respect, the Commission considers that the transaction will significantly change the structure of this market, since there would be a substantial increment in market share. The merged entity would become the strongest player in the market. Moreover, only one other significant player, Heubach, would be present in the market. Therefore, as some respondents pointed out there is a risk that BASF would increase prices after the concentration.
136. Given the above findings, and in particular the Parties' high combined market shares in the market for indanthrone blue, the Commission considers the transaction raises serious doubts as to its compatibility with the common market in relation to this market for all reasonable alternative product and geographic market definitions.

#### *Commitments submitted by BASF*

137. On 19 February 2009, BASF submitted commitments to address the Commission's concerns with regard to the indanthrone blue market. In order to remove these concerns, the Parties propose to divest Ciba's worldwide Indanthrone Blue business. In particular, this divestment includes the transfer of Ciba's know how for the finishing of IB, the transfer [...], the transfer of Ciba's customer lists, all supply agreements with Ciba's customers and inventories. For a transitional period of up to [...] the Parties offer to finish IB for the purchaser in the Ciba finishing plant in [...] on the basis of a toll-manufacturing agreement. The merged entity will toll manufacture IB for the potential purchaser only during this period whereas afterwards the merged entity will no longer be involved in IB manufacturing.
138. BASF considers that the proposed divestment eliminates the entire overlap in indanthrone blue and, therefore, is suitable to remove any significant impediment to effective competition.
139. The Commission has market tested the proposed commitment with competitors and customers in order to evaluate whether it will restore effective competition in this market and whether the divested business is viable. The result of the market test revealed that this is the case and in particular that the divestment would remove any competition concern in the indanthrone blue market post-merger.
140. Given the above findings and the fact that the proposed remedy eliminates the entire overlap from the Parties' activities in the indanthrone blue market, the Commission considers the commitment concerning indanthrone blue business sufficient to remove the competition concerns on this market.

#### *Isoindolines*

141. For isoindoline, the combined market share of the Parties on an EEA level would be [50-60] % (with an increment of [0-5] %) and [50-60] % on a worldwide level. Competitors, as illustrated in the below table, are Clariant ([10-20] % EEA, [0-5] %

worldwide), Synthesia ([5-10] %, both EEA and worldwide) and DIC/SUN ([0-5] % EEA, [0-5] % worldwide).

Table: Isoindoline (2007 figures)

Isoindoline (2007 figures)				
Suppliers	WW sales (€ million)	WW market share (%)	EEA sales (€ million)	EEA market share (%)
BASF	[...]	[50-60]	[...]	[50-60]
Ciba	[...]	[0-5]	[...]	[0-5]
<b>Combined</b>	<b>[...]</b>	<b>[50-60]</b>	<b>[...]</b>	<b>[50-60]</b>
Clariant	[...]	[10-20]	[...]	[10-20]
Synthesia	[...]	[5-10]	[...]	[5-10]
DIC/SUN	[...]	[0-5]	[...]	[0-5]
Shenyang Jiahe	[...]	[0-5]	[...]	[0-5]
Others	[...]	[20-30]	[...]	[20-30]
<i>Total</i>	<i>47</i>	<i>100</i>	<i>32</i>	<i>100</i>

(Figures may not add up due to rounding)

Source: BASF and Ciba actual sales. Market volumes and competitor data: BASF and Ciba best estimates.

142. In terms of applications, the Parties' activities overlap in plastic and coatings applications. In industrial coatings applications, there is an overlap only at the worldwide level, since Ciba is not active on an EEA level. The Parties' combined market share would be [40-50]% in the EEA and [40-50] % worldwide in plastic applications, with an increment below [0-5] % in both cases. In the case of coating applications the market share is higher: [50-60] % worldwide (with a smaller increment of [0-5] %). Finally, as regards other applications the market volume is negligible (limited to 7.1 M Euros worldwide) and there are no overlaps on an EEA level.
143. BASF submits that, regardless of the high combined market shares, the transaction will not lead to competition concerns, since Ciba is a niche player in the market and BASF and Ciba's products are not particularly close substitutes. Furthermore, the parties are aware of several companies considering or preparing market entry<sup>44</sup>. In that regard, the market investigation corroborated that new entries are foreseen within the next three years. However, it did not confirm that BASF and Ciba's products were not close substitutes.
144. BASF underlined that the transaction results in a *de minimis* increment, with an overlap not exceeding [below 500.000] Euros in the EEA. Given these factors, the Commission's view is that the transaction will not give rise to any structural change in the market, as the increment due to the transaction is, under any possible market

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<sup>44</sup> i.e. Hangzhou Riva Chemical Co., Ltd., Jeco Pigment and Shangdong Yuhong Pigments Co., Ltd. (China).

definition, below [0-5] %. Moreover, the market investigation confirmed that it is feasible for new entrants to enter the market.

In the absence of any structural change, the Commission considers that the transaction will not lead to a significant impediment to in relation to the isoindoline market.

### *Perylenes*

145. For perylene, the combined market share of the Parties on an EEA level would be [40-50]% (with an increment of [0-5] %) and [40-50] % on a worldwide level. Competitors in the EEA are DIC/SUN ([30-40] %), Clariant ([10-20] %) and Liaoning ([5-10] %).

**Table: Perylene (2007 figures)**

<b>Perylene (2007 figures)</b>				
<b>Suppliers</b>	<b>WW sales (€ million)</b>	<b>WW market share (%)</b>	<b>EEA sales (€ million)</b>	<b>EEA market share (%)</b>
BASF	[...]	[40-50]	[...]	[40-50]
Ciba	[...]	[0-5]	[...]	[0-5]
<b>Combined</b>	<b>[...]</b>	<b>[40-50]</b>	<b>[...]</b>	<b>[40-50]</b>
DIC/SUN	[...]	[30-40]	[...]	[30-40]
Clariant	[...]	[10-20]	[...]	[10-20]
Liaoning	[...]	[0-5]	[...]	[5-10]
Others	[...]	[5-10]	[...]	[5-10]
<i>Total</i>	<i>69</i>	<i>100</i>	<i>29</i>	<i>100</i>

*(Figures may not add up due to rounding)*

*Source: BASF and Ciba actual sales. Market volumes and competitor data: BASF and Ciba best estimates.*

146. As regards possible sub-segments, the Parties' activities only overlap in industrial and automotive coating applications. Even though in these two alternative markets BASF has a significant market share ([30-40] % EEA and [30-40] % worldwide in industrial coatings; and [40-50] % EEA and [30-40] % in automotive coatings), increments due to the transaction are not significant, since Ciba is a small player in the market ([5-10]% in the EEA and [0-5]% worldwide in industrial coatings; and [0-5] % EEA and [5-10] % worldwide in automotive coatings). Furthermore, there are strong competitors present in these markets, such as DIC/SUN ([30-40] % worldwide and [30-40] % EEA for industrial coatings, and [40-50] % worldwide and [40-50] % EEA for automotive coatings) or Clariant ([10-20] % worldwide and [5-10] % EEA for industrial coatings and [5-10] % worldwide and [5-10] % EEA for automotive coatings).
147. BASF underlines that the transaction will not significantly alter the structure of the market, since Ciba's market share is very low and has been decreasing over the past years. In addition, the transaction concerns a small increment in terms of turnover of perylenes (€ [below 500.000] in the EEA).
148. BASF further submits that Ciba is not a viable supplier, [...]. Therefore, the merger would not eliminate a significant competitive restraint on BASF.

149. The market investigation confirmed that switching from one crude supplier to another would require a re-qualification process that would imply a significant investment in terms of costs and time. Alternative suppliers may not be able to meet the specifications required by Ciba.
150. Taking into consideration the above factors, in particular, the small increments brought about by the transaction, the Commission takes the view that the transaction will not lead to a significant impediment to effective competition in the perylenes market.

#### *Lead Chromate*

151. As for lead chromate, the combined market share of the Parties in the EEA would be [20-30] % (with an increment of [5-10] %) and [10-20] % on a worldwide level, with strong competitors being present in the market, such as DCC, Nubiola, Cappelle and Bruchsalser Farben, inter alia. BASF submits that the demand for lead chromate pigments is declining (it is increasingly substituted by bismuth vanadate).

Table: Lead chromate pigments (2007 figures)

<b>Lead chromate pigments (2007 figures)</b>				
<b>Suppliers</b>	<b>WW sales (€ million)</b>	<b>WW market share (%)</b>	<b>EEA sales (€ million)</b>	<b>EEA market share (%)</b>
BASF	[...]	[5-10]	[...]	[10-20]
Ciba	[...]	[0-5]	[...]	[5-10]
<b>Combined</b>	<b>[...]</b>	<b>[10-20]</b>	<b>[...]</b>	<b>[20-30]</b>
DCC	[...]	[10-20]	[...]	[5-10]
Nubiola	[...]	[5-10]	[...]	[10-20]
Cappelle	[...]	[0-5]	[...]	[10-20]
Bruchsalser Farben	[...]	[0-5]	[...]	[10-20]
Others	[...]	[50-60]	[...]	[20-30]
<i>Total</i>	<i>267</i>	<i>100</i>	<i>51</i>	<i>100</i>

*(Figures may not add up due to rounding)*

*Source: BASF and Ciba actual sales. Market volumes and competitor data: BASF and Ciba best estimates*

152. Regarding the substitutability, the market investigation confirmed that each pigment class belongs to a different product market. Moreover, in the case of lead chromate, the respondents made clear that bismuth vanadate and lead chromate are not close substitutes.
153. With regard to applications, lead chromate is no longer used in certain plastic and coatings applications, such as toys and specific automotive applications due to environmental and health concerns. Due to these concerns, the demand for this product has been declining during the last years. If a market per application would be considered, the Parties' combined market shares would remain below [20-30] % in any alternative market definition.
154. In any case, due to the moderate combined market shares (and the small increments), as well as the presence of strong competitors in the market, the Commission considers

that the transaction does not raise serious doubts as to its compatibility with the common market in relation to the lead chromate market.

### *Pearlescent pigments*

155. Post-merger, as indicated in the table below, the Parties' combined market share in the market for pearlescent pigments would be [20-30] % on an EEA level and [20-30] % worldwide, with an increment of [0-5] % and [0-5] %, respectively.

Table: Pearlescent pigments (2007 figures)

<b>Pearlescent pigments (2007 figures)</b>				
<b>Suppliers</b>	<b>WW sales (€ million)</b>	<b>WW market share (%)</b>	<b>EEA sales (€ million)</b>	<b>EEA market share (%)</b>
BASF	[...]	[20-30]	[...]	[20-30]
Ciba	[...]	[0-5]	[...]	[0-5]
<b>Combined</b>	<b>[...]</b>	<b>[20-30]</b>	<b>[...]</b>	<b>[20-30]</b>
Merck	[...]	[50-60]	[...]	[60-70]
Altana/Eckart	[...]	[0-5]	[...]	[0-5]
Sun	[...]	[0-5]	[...]	[0-5]
Taizhou	[...]	[0-5]	[...]	[0-5]
Kuncai	[...]	[0-5]	[...]	[0-5]
Others	[...]	[10-20]	[...]	[5-10]
<i>Total</i>	<i>500</i>	<i>100</i>	<i>170</i>	<i>100</i>

*(Figures may not add up due to rounding)*

*Source: BASF and Ciba actual sales. Market volumes and competitor data: BASF and Ciba best estimates.*

156. BASF argues that, in addition to the insignificant increment, there are other significant competitors in the EEA market, in particular Merck with a market share of [50-60] % in the EEA. Thus no competition concerns would arise from the proposed transaction with regard to pearlescent pigments.
157. In terms of applications, the transaction does not lead to competition concerns, since the Parties' combined market share does not exceed [20-30] % in the markets for coating and plastic applications or any further sub-divisions, both at EEA and worldwide level. Also, if a third market encompassing the remaining applications would be considered, the Parties' combined market share would be [30-40] % worldwide and [30-40] % in the EEA, but with a negligible increment ([0-5] % in the EEA and [0-5] % worldwide).
158. It Since the Parties' combined market shares are below [30-40] % in any alternative product and geographic market and the increment in each case is negligible, the Commission concludes that the transaction does not raise serious doubts as to its compatibility with the common market in relation to the pearlescent pigments market.

### *Dyes*

159. The Parties' activities overlap in the following markets for dyes: (i) acid dyes, (ii) basic dye, (iii) direct dyes, (iv) dyes for coatings (v) dyes for plastic and (vi) dyes for paper applications. In the case of acid, basic and direct dyes, the transaction does not raise

competitive concerns since the Parties' combined market shares both at worldwide and at EEA level are moderate, namely: [20-30] % in acid dyes, [20-30] % in basic dyes and [20-30] % indirect dyes ([5-10] %, [10-20] % and [10-20] % on a worldwide level, respectively).

160. Moreover, the Parties will face sufficient competition from competitors present in the markets, inter alia: Clariant ([10-20] % EEA and [5-10] % worldwide), Huntsman ([5-10] % EEA and [0-5] % worldwide) and DyStar ([5-10] % EEA and [0-5] % worldwide) for acid dyes; DyStar ([10-20] % EEA, [10-20] % worldwide), Huntsman ([10-20] % EEA, [0-5] % worldwide) and Albion ([5-10] % EEA, [0-5] % worldwide) for basic dyes, and Clariant ([30-40] % EEA, [10-20] % worldwide) Kemira ([10-20] % EEA, [5-10] % worldwide) and DyStar ([5-10] % EEA, [5-10] % worldwide) for direct dyes.
161. As far as the markets by applications are concerned, the Parties combined market shares are below [30-40] % in all the markets, with the exception of the market for dyes for paper. In that market the combined market share of the Parties on the EEA level would be [30-40] % (with an increment of [10-20] %) and [20-30] % on a worldwide level. Nevertheless, there would be strong competitors on the market, such as Clariant ([30-40] % EEA, [10-20] % worldwide), Kemira ([10-20] % EEA, [10-20] % worldwide) and Albion ([5-10] % EEA and [0-5] % worldwide).
162. In addition, BASF argues that their products are not close substitutes because BASF is strong in dyes for packaging and newsprint whereas Ciba's product range concentrates on wood-free, packaging and tissue paper. BASF also submits that customers are large paper companies with an elevated countervailing bargaining power.
163. None of the respondents of the market investigation raised any serious and substantiated concerns with regard to any of the alternative product and geographic markets for dyes. Some third parties expressed their view that the transaction would have no impact in the market. Moreover, the market investigation confirmed that, following the transaction, there would be sufficient alternative suppliers in the market. Given the above factors and in particular the moderate combined market shares in the alternative dyes markets, the Commission considers that the transaction does not raise serious doubts as to its compatibility with the common market in relation to dyes, regardless of the market definitions taken into account.

#### **4. LATEX PRODUCTS**

164. Latex is used as a binder in various applications including paper and non-wovens. Latex is produced through the polymerization of one or more of monomers, principally butadiene, styrene, methyl methacrylate, ethylacrylates, 2-EHA, BA, vinyl acetate, or ethylene<sup>45</sup>. The choice of different basic monomers determines the various dispersion types, (latexes) i.a. carboxylated styrene butadiene (XSB), styrene acrylate (SA) and all-acrylics (AA) dispersions. The Parties' combined market share exceeds 15% for all these products.

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<sup>45</sup> The principal types of latex are acrylic, which includes all-acrylic ("AA") and styrene-acrylic ("SA"); vinyl, which includes vinyl-acrylic ("VA"), vinyl versatate ("VV"), polyvinyl acetate ("PVAc") and vinyl acetate ethylene ("VAE"), styrene butadiene ("SB"); hollow sphere particles ("Hollow") and polystyrene ("PS").

#### 4.1. Relevant product market

165. The Commission has defined product markets according to the type of latex dispersion (i.e., chemical composition) and also by its application<sup>46</sup>. In Rhodia/Raisio/JV the Commission therefore identified markets *inter alia* for SA latex polymers, SB latex polymers, and AA latex polymers<sup>47</sup>, with a further segmentation by application of the latexes in the production of paper, carpet and non-woven textiles.
166. BASF contends that the product market should be defined according to dispersion type, but no further delineations should be made.
167. The market investigation has confirmed that the segmentation according to the type of dispersion, as well as by application, are most commonly used within the latex industry and among its customers. The market investigation also demonstrated that the different latexes are partially substitutable or interchangeable with one another which is also in line with the findings in previous Commission decisions.
168. As regards paper applications, the replies confirmed that in general, XSB and SA dispersions cannot totally be substituted by one another. For specialty papers, substitution is even more difficult.
169. Regarding SA used in paper applications, one customer claimed that SA for LWC (light weight, two-side coated) rotogravure paper is a special product market. This was not supported by other replies. Customers considered that the narrowest product market definition applicable is latex product markets per dispersion type and per application type. Also the producers generally tend to divide the market by dispersion and application, but not further within the paper application. This is in line with the Commission's previous findings that the market should not be further divided into submarkets according to the grade qualities of the latexes<sup>48</sup>.
170. Usually the customers substitute dispersions they use with the same type of dispersion for the same application. The paper application requires special know how and large production volumes, and therefore is not easy to enter. However, the producers also clearly stated that anyone capable of producing SA for paper applications can meet the specifications of customers for any paper type. Therefore, the Commission does not consider it necessary to sub-segment the paper application market further.
171. The Commission has identified the following affected product markets by application: the dispersions XSB and SA for paper applications, and AA dispersions for nonwovens applications.

#### 4.2. Relevant geographic market

172. The Commission has previously considered the relevant geographic market for latexes to be EEA-wide<sup>49</sup>. BASF submits that the relevant geographic market is EEA wide in

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<sup>46</sup> See COMP/M.1993 – Rhodia/Raisio/JV

<sup>47</sup> Pure acrylic latex polymers and all acrylic latex polymers are synonymous terms used in the chemical industry.

<sup>48</sup> Bayer/Hüls, M.751, Wacker/Air Products, M.1097 and Rohm & Haas/Morton, M.1467.

<sup>49</sup> Bayer/Hüls, M.751, Wacker/Air Products, M.1097 and Rohm & Haas/Morton, M.1467.



line with the previous findings of the Commission. The majority of replies given in the market investigation supported these findings.

173. The market investigation clearly indicated that the geographic market for latexes is the same regardless of dispersion type. Two customers submitted that SA for LWC rotogravure paper or rotogravure paper is a special product market for which, due to the important volumes, substantial transport costs (complicated logistics of heated, temperature controlled tanks and multimodal transport), the relevant geographic market would be national in the Nordic countries (Finland)<sup>50</sup>.
174. This was contradicted by the findings of the market investigation. The market investigation provided information as to the extent that SA paper latex products (including but not limited to rotogravure paper latexes) were actually sold and transported cross-border. The transport distances were between 100 km to 2500 km. Many producers sell SA latexes exclusively from their Central European plants or plants in neighbouring countries to Finland. There were no important differences in the price levels of latexes in the EEA, despite the transport costs. This evidence supported the Commission's previous findings of EEA wide markets. Therefore, in line with its previous practice the Commission considers the markets for any and all types of latex products to be EEA-wide.
175. While the existence of separate national markets for the supply of latexes for paper to LWC rotogravure customers was not supported by other replies, the Commission notes, however, that the commitment offered by BASF (in point 207) also addresses any competition problems on the hypothetical Finnish and/or regional (Nordic) markets.

### **4.3. Competitive assessment**

#### *Horizontal effects*

176. The replies to the Commission's market investigation indicated that latex production is a capacity-driven industry. There are not many specialities, and the producers face considerable competition pressures because of low capacity utilisation. It also confirmed that the producers generally seem to be able to switch from producing one latex to another<sup>51</sup>, especially between SA and AA latexes.
177. The affected markets XSB, SA and AA are analyzed below first by dispersion type and then within each dispersion by the affected application type.
178. BASF submitted market shares by value and volume. The market shares are calculated by value<sup>52</sup>.

#### *XSB overall market*

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<sup>50</sup> One customer stated the following "The Special transport means that the tanks are dedicated only for latex and truck tanks must be cleaned properly after the transportation. Further, latex requires warm transportation. The latex transportation price increases significantly, if transportation contains both sea transport and truck transport. Therefore, it can be regarded that the latex market in Finland is local and in Central Europe regional."

<sup>51</sup> These findings were also substantiated in the recent case M.5424 DOW/R&H.

<sup>52</sup> The market investigation showed that the market shares calculated by value or by volume were closely aligned.

179. BASF provided the following market share table for the overall XSB dispersions market.

**XSB dispersions (2007 figures)**

Latices – XSB dispersions (2007 figures)				
Suppliers	WW sales (€ million)	WW market share (%)	EEA sales (€ million)	EEA market share (%)
<b>BASF</b>	[...]	<b>[10-20]</b>	[...]	<b>[10-20]</b>
<b>Ciba</b>	[...]	<b>[5-10]</b>	[...]	<b>[5-10]</b>
Combined	[...]	[10-20]	[...]	[20-30]
<b>Dow / Rohm &amp; Haas</b>	[...]	<b>[30-40]</b>	[...]	<b>[30-40]</b>
<b>PolymerLatex</b>	[...]	<b>[5-10]</b>	[...]	<b>[10-20]</b>
<b>Synthomer</b>	[...]	<b>[0-5]</b>	[...]	<b>[5-10]</b>
<b>Polimeri Europa</b>	[...]	<b>[0-5]</b>	[...]	<b>[0-5]</b>
<b>EOC Group</b>	[...]	<b>[0-5]</b>	[...]	<b>[0-5]</b>
<b>Others</b>	[...]	<b>[30-40]</b>	[...]	<b>[5-10]</b>
<b>Total</b>	<b>4,410</b>	<b>100</b>	<b>1,728</b>	<b>100</b>
<i>(Figures may not add up due to rounding)</i>				

Source: BASF and Ciba actual sales. Market volumes and competitors data: BASF and Ciba best estimates

180. These markets shares were broadly confirmed by the market investigation. The market test showed that the market for XSB dispersions is competitive (many important players), that there is over-capacity, and that generally there are no competition concerns. Therefore, the Commission has not identified serious doubts as to the compatibility of the transaction with the common market in the market for XSB latexes in general.

*XSB for paper applications*

181. XSB is used as a binder in paper coatings. The role of the binder is to glue the ingredients of the coating materials together and onto the paper surface.

182. The market investigation revealed the following market shares by value.

**XSB dispersions for paper applications EEA market shares (%)**

Suppliers	EEA market share (%)
<b>BASF</b>	<b>[10-20]</b>
<b>Ciba</b>	<b>[10-20]</b>
<b>Combined</b>	<b>[30-40]</b>
<b>DOW/R&amp;H</b>	<b>40-50</b>
<b>PolymerLatex</b>	<b>10-20</b>
<b>Others</b>	<b>0-10</b>
<b>Total</b>	<b>100</b>

183. The merged entity would be the second largest producer of XSB after DOW/R&H with a 40-50% market share. PolymerLatex would have a market share of 10-20%. Other strong fringe players in this market, as well as suppliers with a potential to serve the paper application would still exist.

184. However, on respondent in the market investigation claimed that all paper latexes, especially XSB latexes, are used in large quantities. The merger would substantially change the competitive landscape as it would result in the consolidation of the XSB market (from 4 to 3 major producers capable to provide large quantities).
185. On the basis of this submission, the Commission examined the necessary and available capacities. The Commission found evidence that there is sufficient capacity of XSB for paper applications and that it is geographically evenly spread. There are also large unused spare capacities which would constrain any unilateral price increases. The average capacity usage ratio of XSB paper latex producers appears to be approximately 70-80%. There are also producers that can switch into paper application XSB depending on the market conditions.
186. The Commission also interviewed customers on the price setting mechanism. A large customer stated that the pricing of XSB latexes for paper applications is transparent, that it directly follows the price increases of input materials, but that all suppliers compete for supply contracts every time they are renewed (mainly annually). This was confirmed by other customers.
187. Based on an overall assessment of these factors the Commission considers that the concentration does not raise serious doubts as to its compatibility with the common market in the market for XSB latexes for paper applications.

*AA overall market*

188. BASF provided the following market share table for the overall AA dispersions market.

AA dispersions (2007 figures)

Latices – AA dispersions (2007 figures)				
Suppliers	WW sales (€ million)	WW market share (%)	EEA sales (€ million)	EEA market share (%)
<b>BASF</b>	[...]	<b>[10-20]</b>	[...]	<b>[20-30]</b>
<b>Ciba</b>	[...]	<b>[0-5]</b>	[...]	<b>[0-5]</b>
Combined	[...]	[10-20]	[...]	[20-30]
<b>Dow / Rohm &amp; Haas</b>	[...]	<b>[40-50]</b>	[...]	<b>[20-30]</b>
<b>Hexion</b>	[...]	<b>[0-5]</b>	[...]	<b>[0-5]</b>
<b>Celanese</b>	[...]	<b>[0-5]</b>	[...]	<b>[5-10]</b>
<b>PolymerLatex</b>	[...]	<b>[0-5]</b>	[...]	<b>[0-5]</b>
<b>Cray Valley</b>	[...]	<b>[0-5]</b>	[...]	<b>[0-5]</b>
<b>Synthomer</b>	[...]	<b>[0-5]</b>	[...]	<b>[0-5]</b>
<b>Organik Kimya</b>	[...]	<b>[0-5]</b>	[...]	<b>[0-5]</b>
<b>DSM Neoresins</b>	[...]	<b>[0-5]</b>	[...]	<b>[0-5]</b>
<b>ICAP</b>	[...]	<b>[0-5]</b>	[...]	<b>[0-5]</b>
<b>Alberdingk</b>	[...]	<b>[0-5]</b>	[...]	<b>[0-5]</b>
<b>Ercros</b>	[...]	<b>[0-5]</b>	[...]	<b>[0-5]</b>
<b>Others</b>	[...]	<b>[20-30]</b>	[...]	<b>[20-30]</b>
<b>Total</b>	<b>2,970</b>	<b>100</b>	<b>858</b>	<b>100</b>
<i>(Figures may not add up due to rounding)</i>				

Source: BASF and Ciba actual sales. Market volumes and competitors data. BASF and Ciba best estimates.

189. The market investigation broadly confirmed these market shares. The increment brought about by the merger is small. There are important surplus capacities available. No concerns were raised in the market investigation. Therefore, the Commission

considers that concentration does not raise serious doubts as to its compatibility with the common market in relation to the market for AA latexes in general.

*AA for non-wovens applications market*

190. Non-wovens are manufactured by putting small fibres together in the form of a sheet or web, and then binding them chemically *inter alia* by using binders. AA dispersions are used in nonwovens when properties such as soft hand, drape, washability, light stability, durability, and low shrinkability are required. Due to the higher price of AA dispersions, they are employed exclusively in apparel interlinings, where these qualities are required.
191. The market investigation provided the following value based market shares on the overall EEA market size of € 50 million.

**AA dispersions for non-wovens applications EEA market shares (%)**

Suppliers	Market test
<b>BASF</b>	<b>[10-20]</b>
<b>Ciba</b>	<b>[5-10]</b>
<b><i>Combined</i></b>	<b><i>[20-30]</i></b>
<b>Rohm &amp; Haas</b>	<b>40-50</b>
<b>Icap-Sira</b>	<b>20-30</b>
<b>PolymerLatex</b>	<b>0-10</b>
<b><i>Others</i></b>	<b><i>0-10</i></b>
<b><i>Total</i></b>	<b><i>100</i></b>

192. The merged entity would be the third largest producer of AA for nonwovens. The largest producer would be DOW/R&H with a 40-50% market share. Icap-Sira would have roughly the same market share as BASF/Ciba. PolymerLatex would also be a strong competitor.
193. The increment brought about by the concentration is not significant. Excess capacities are available as the capacity utilisation rate is between 70-80%. No competition concerns were expressed during the market investigation.
194. Given all these factors, the Commission considers that the operation does not raise serious doubts as to its compatibility with the common market in relation to the market for AA latexes for nonwovens application.

*SA overall market*

195. The Notifying Party provided the following market share table for the overall SA dispersions market.

**SA dispersions (2007 figures)**

Latices – SA dispersions (2007 figures)				
Suppliers	WW sales (€ million)	WW market share (%)	EEA sales (€ million)	EEA market share (%)
<b>BASF</b>	[...]	<b>[20-30]</b>	[...]	<b>[30-40]</b>
<b>Ciba</b>	[...]	<b>[0-5]</b>	[...]	<b>[0-5]</b>
Combined	[...]	[20-30]	[...]	[30-40]
<b>Dow / Rohm &amp; Haas</b>	[...]	<b>[10-20]</b>	[...]	<b>[10-20]</b>
<b>Hexion</b>	[...]	<b>[0-5]</b>	[...]	<b>[5-10]</b>
<b>Celanese</b>	[...]	<b>[0-5]</b>	[...]	<b>[0-5]</b>
<b>Synthomer</b>	[...]	<b>[0-5]</b>	[...]	<b>[0-5]</b>
<b>Cray Valley</b>	[...]	<b>[0-5]</b>	[...]	<b>[0-5]</b>
<b>PolymerLatex</b>	[...]	<b>[0-5]</b>	[...]	<b>[0-5]</b>
<b>DSM Neoresins</b>	[...]	<b>[0-5]</b>	[...]	<b>[0-5]</b>
<b>Alberdingk</b>	[...]	<b>[0-5]</b>	[...]	<b>[0-5]</b>
<b>ICAP</b>	[...]	<b>[0-5]</b>	[...]	<b>[0-5]</b>
<b>Ercros</b>	[...]	<b>[0-5]</b>	[...]	<b>[0-5]</b>
<b>Organik Kimya</b>	[...]	<b>[0-5]</b>	[...]	<b>[0-5]</b>
<b>Others</b>	[...]	<b>[40-50]</b>	[...]	<b>[10-20]</b>
<b>Total</b>	<b>3,420</b>	<b>100</b>	<b>1,055</b>	<b>100</b>
<i>(Figures may not add up due to rounding)</i>				

Source: BASF and Ciba actual sales. Market volumes and competitors data. BASF and Ciba best estimates

196. The market investigation broadly confirmed these market shares. The increment brought about by the merger is small. There are important surplus capacities available. No concerns were raised in the market investigation. Therefore, the Commission considers that the operation does not raise serious doubts as to its compatibility with the common market in relation to the market for SA latices in general.

*SA paper applications market*

197. In line with its previous practice, the Commission also analyzed SA latex for paper applications. SA is used in paper/packaging principally as a binder in paper coatings, or to impart gloss or low odour to the coating.

198. The Parties' market shares in SA for paper applications were higher than BASF estimated. On the basis of the market test results, the Commission considers the market size in value and/or in volume to be smaller than BASF estimates. BASF estimated the EEA SA paper latex market size to be € 285 million. The Commission has found strong indications that the market size is much smaller (i.e. between €210-225 million). The following table results from the Commission's reconstruction of the market using the outcome of the market test for competitors when available and BASF's figures for the parties and for those competitors which did not respond to the market investigation.

**SA dispersions for paper applications: EEA market shares (%)**

Suppliers	Parties estimate	Market test
<b>BASF</b>	<b>[40-50]</b>	<b>[50-60]</b>
<b>Ciba</b>	<b>[0-5]</b>	<b>[5-10]</b>
<i>Combined</i>	<i>[40-50]</i>	<i>[60-70]</i>
<b>DOW/R&amp;H</b>	<b>20-30</b>	<b>20-30</b>
<b>Others</b>	<b>10-20</b>	<b>0-10</b>
<i>Total</i>	<i>100</i>	<i>100</i>

199. During the market investigation it was claimed that SA paper latexes are used in large quantities. The merger would change substantially the competitive landscape as it would result in the consolidation of SA markets (from 3 to 2 major producers BASF/Ciba and DOW/R&H). These two producers would be unavoidable partners as no-one else would be able to produce the required amounts of SA for paper applications.
200. Two customers submitted that the combined entity would be able to raise prices of SA based binders for LWC rotogravure or rotogravure printing paper in Finland due to the lack of alternative producers in Finland. There are only two main suppliers manufacturing SA for paper applications in Finland, who would now merge. BASF had raised prices previously in another product market where BASF had become the sole supplier in Finland.
201. The Commission notes that the customers voicing these latter concerns referred to the alleged national scope of the SA paper latex markets which in their view would be limited to Finland. However, as explained in point 172-, this was not confirmed by the market test.
202. It was also claimed that the switching process is difficult in SA for paper applications. SA is usually designed for specific purposes and end-uses. A change of supplier would usually require extensive testing (laboratory, pilot manufacture, trial manufacture and customer feed back). Switching would take in average 6 months. In some applications the lead time could be more than a year.
203. Customers therefore are not likely to change to a supplier whose reliability and technical capacities they do not know. Each customer tries to maintain at least two prequalified suppliers, but even then switching may take several months. However, the replies to the market test indicate that some switching of SA paper latex suppliers occurs.
204. Some competitor replies pointed to the fact that manufacturing paper applications demands in-depth knowledge of the paper industry and its needs, including for example pilot coaters not available to every producer. Therefore entering into the segment or competing effectively would not be easy for a company not already serving the paper industry.
205. The merger will result in the elimination of a relatively strong and well-reputed supplier of SA for paper applications. In addition to its [5-10] % market share Ciba has extensive knowledge of the paper industry and also supplies other paper chemicals.

*Serious doubts in SA paper application market*

206. On the basis of an overall assessment of these factors, the Commission considers that the transaction raises serious doubts as to its compatibility with the common market. The market test clearly showed that the merged entity will be the dominant market player with a market share exceeding twice that of its closest competitor DOW/R&H. All the other market participants have marginal market shares ([0-5] %) The transaction would significantly decrease the competitive pressure currently existing on this market and would in practice result in a duopoly with a dominant player on the market. The third sufficiently credible and strong alternative with potential to curb price increases would cease to exist.

*Proposed remedy package in styrene acrylic latex (SA) for paper applications*

207. In order to remove the competition concerns identified by the Commission, BASF proposes the divestment of Ciba's entire SA business (including PVAc and AA) production lines for SA, PVAc and AA in Kaipiainen, Finland<sup>53</sup>. In particular, this would include the transfer of the SA / PVAc / AA production unit (including the building), inventories, production know how, customer supply contracts, raw material supply contracts, customer lists and the transfer of personnel.

208. In addition, unless not required by the purchaser, BASF offers to enter into a long-term supply agreement to supply raw materials for the production of SA / PVAc / AA: namely [...]. The price of these raw materials would consist of the procurement cost plus a reasonable service fee ([...]).

209. BASF submits that the divestment of Ciba's SA business would remove the entire EEA overlap of the Parties' activities in SA for paper applications and therefore eliminate the Commission's competition concerns.

*Results of the market test of the remedy package in styrene acrylic latex (SA) for paper applications*

210. The overwhelming majority of respondents to the market test considered the proposed divestiture to be a viable business resolving the competition issues.

*Assessment of the remedy*

211. As to the viability of the remedy, at the request of the purchaser, the raw material (monomers) supply to the plant would be secured at reasonable and transparent terms. The Commission also notes the interest of a competitor with know-how of the latex market (including paper applications) in the assets.

212. The divestment of Ciba's SA business removes the entire EEA overlap of the Parties' activities in SA for paper applications. The proposed remedy was well received by the

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<sup>53</sup> In SA, Ciba is predominantly active in paper application.

market. The divestment eliminates the competition concerns expressed during the market test.

213. In the light of the results of market test, the Commission considers that a sale of Ciba's SA paper application latex business removes the serious doubts as to the compatibility of the merger with the common market in the market for SA latexes for paper applications.

## **5. UV FILTERS**

214. Both parties produce and sell UV filters for cosmetic applications, in particular for sunscreens. BASF produces two UV filters [...], i.e. Uvinul T150 (now off-patent) and Uvinul A Plus, as well as two commoditised UV filters, i.e. OMC and octocrylene. Furthermore, BASF is active as a reseller of two other UV filters: titanium dioxide and zinc dioxide. Ciba's activities in this sector are focused on two products, i.e. Tinosorb S and Tinosorb M, which are patent-protected.

### **5.1. Product market definition**

215. UV filters for skin care are cosmetic ingredients which are added to sunscreen and day care products in order to protect the skin from ultraviolet (UV) radiation. Overexposure to such a radiation can lead to damage of the skin. Within UV radiation, one can distinguish between UVA radiation and UVB radiation. Overexposure to UVB rays causes sunburn and increases the risk of skin cancer. UVA rays, on the other hand, penetrate the skin more deeply than UVB rays and have in recent years been shown to cause long-term skin damage, including changes in blood vessels and photo-aging. Therefore, they may do even more damage than UVB rays. In 2006 the Commission issued the Recommendation on the efficacy of sunscreen products<sup>54</sup>. According to this recommendation all sunscreen products should provide for a minimum degree of protection against both UVA and UVB radiation. This minimum degree should include a UVB protection of Sun Protection Factor<sup>55</sup> (SPF) 6 as well as a UVA protection factor of 1/3 of the SPF.
216. Different filters have different properties relating to the range of UV radiation against which the filter protects, the filter's photo-stability (i.e. the duration of its effectiveness), its visual and tactile appearance, etc.
217. The Commission has not yet examined UV filters for skin care. However, in a previous decision<sup>56</sup> the Commission stated that all cosmetic ingredients constitute a single market. In its definition of cosmetic ingredients, the Commission also mentioned sunscreen agents as an example, which is the main application of UV filters. The parties did not contest this broad product market definition. Nevertheless, they pointed out that due to their specific functionality and chemical composition, UV filters may be distinguished from other cosmetic ingredients.

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<sup>54</sup> OJ L 265, 26.9. 2006.

<sup>55</sup> Sun Protection Factor (SPF) expresses the protection products offer against UVB radiation. It is the ratio of the amount of sun exposure that would cause the skin to burn if protected by the product to the amount of sun exposure that would burn the skin without the sunscreen.

<sup>56</sup> Case No COMP/M.2926 – EQT / R&H / DRAGOCO.



218. The market investigation has confirmed that UV filters should be distinguished from other cosmetic ingredients as entry barriers to this market are extremely high in comparison to other raw materials used for the production of cosmetics. Firstly, the development cycle for UV filters is relatively long, comparable with a development cycle for pharmaceutical products. Secondly, in advanced countries the regulation of UV filters is strict leading to complex and lengthy approval procedures. Finally, as UV filters are relatively costly, their share in the total production cost is much higher than for other cosmetic ingredients. Consequently, they play a substantial role in the overall cost and cost competitiveness of the final consumer product.
219. BASF submits that the market for UV filters could be further sub-segmented into physical and chemical filters due to their different properties and solubility characteristics. Physical UV filters consist of insoluble micro-particles which reflect and scatter light. They do not penetrate the skin but cover the skin surface. As physical UV filters usually appear and stay on the skin's surface, they are used mainly for pharmaceutical and dermatological formulations and are only of limited use in cosmetics. In contrast, chemical UV filters absorb light and transform it into heat. They do not block the UV rays from reaching the skin but rather inhibit the damage they do to the skin. Since they become invisible when properly applied, chemical UV filters are used for cosmetic applications, such as sunscreens for sun bathing as well as day care products.
220. The market investigation was not conclusive on whether the market segments of physical and chemical filters should be considered as separate product markets. However, for the purposes of the present case, the market definition can be left open as the competitive assessment does not change regardless of the product market definition.

## 5.2. Geographic market definition

221. The notifying party submits that the market for UV filters is at least EEA-wide. On the basis of the market investigation it is not possible to exclude that the market for UV filters is in fact global in scope. This is due to the existence of significant worldwide flows of UV filters, low transport costs and a multinational character of major customers who have global sourcing strategies. On the other hand, there are significant regulatory barriers that hinder entry to certain markets.
222. For the purposes of the present case the geographic market definition can be left open as the competitive assessment remains the same regardless of the geographic market definition.

## 5.3. Assessment

223. On the overall market for UV filters the transaction leads to combined market shares of [30-40] % worldwide and [30-40]% in the EEA. There is a number of competitors present in the market, e.g. Symrise (WW: [20-30] %; EEA: [10-20] %), Merck (WW: [10-20] %; EEA: [10-20] %) and DSM (WW: [10-20] %; EEA: [10-20] %). With regard to physical filters the transaction leads to combined market shares of [30-40] % worldwide and [30-40]% in the EEA. The competitors are the following: Croda (WW: [10-20] %; EEA: [20-30] %), Tayca (WW: [10-20] %; EEA: [0-5] %), Kemira (WW: [10-20] %; [10-20] %), Merck (WW: [5-10] %; EEA: [10-20]%) and Evonik (WW: [5-10] %; EEA: [10-20] %). The combined market shares with regard to chemical UV filters are slightly higher, i.e. [30-40] % worldwide and [30-40] % in the EEA with competitors such as Symrise (WW: [20-30] %; EEA: [20-30] %); DSM (WW: [10-20] %; EEA: [10-20] %) and Merck (WW: [10-20] %; EEA: [10-20] %) being present on

the market. The market shares and sales data submitted by the parties have been broadly supported by the market investigation and are summarized in the tables below.

Sales and market shares for UV filters for skin care (2007 figures)

Suppliers	WW sales (€million)	WW market share (%)	EEA sales (€million)	EEA market share (%)
BASF	[...]	[10-20]	[...]	[10-20]
Ciba	[...]	[10-20]	[...]	[20-30]
Combined	[...]	[30-40]	[...]	[30-40]
Symrise	[...]	[20-30]	[...]	[10-20]
Merck	[...]	[10-20]	[...]	[10-20]
DSM	[...]	[10-20]	[...]	[10-20]
Others	[...]	[20-30]	[...]	[5-10]
Totals	393	100	224	100
<b>(Figures may not add up due to rounding)</b>				

Source: BASF and Ciba actual sales. Market volumes and competitor data: BASF and Ciba best estimates.

Sales and market shares for physical UV filters for skin care (2007 figures)

Suppliers	WW sales (€million)	WW market share (%)	EEA sales (€million)	EEA market share (%)
<b>BASF</b>	[...]	<b>[10-20]</b>	[...]	<b>[0-5]</b>
<b>Ciba</b>	[...]	<b>[20-30]</b>	[...]	<b>[30-40]</b>
Combined	[...]	[30-40]	[...]	[30-40]
<b>Croda</b>	[...]	<b>[10-20]</b>	[...]	<b>[20-30]</b>
<b>Tayca</b>	[...]	<b>[10-20]</b>	[...]	<b>[0-5]</b>
<b>Kemira</b>	[...]	<b>[10-20]</b>	[...]	<b>[10-20]</b>
<b>Merck</b>	[...]	<b>[5-10]</b>	[...]	<b>[10-20]</b>
<b>Evonik</b>	[...]	<b>[5-10]</b>	[...]	<b>[10-20]</b>
<b>Others</b>	[...]	<b>[10-20]</b>	[...]	<b>[5-10]</b>
<b>Totals</b>	<b>93</b>	<b>100</b>	<b>46</b>	<b>100</b>
<b>(Figures may not add up due to rounding)</b>				

Source: BASF and Ciba actual sales. Market volumes and competitor data: BASF and Ciba best estimates.

Sales and market shares for chemical UV filters for skin care (2007 figures)

Suppliers	WW sales (€million)	WW market share (%)	EEA sales (€million)	EEA market share (%)
<b>BASF</b>	[...]	<b>[20-30]</b>	[...]	<b>[10-20]</b>
<b>Ciba</b>	[...]	<b>[10-20]</b>	[...]	<b>[20-30]</b>
Combined	[...]	[30-40]	[...]	[30-40]
<b>Symrise</b>	[...]	<b>[20-30]</b>	[...]	<b>[20-30]</b>
<b>DSM</b>	[...]	<b>[10-20]</b>	[...]	<b>[10-20]</b>
<b>Merck</b>	[...]	<b>[10-20]</b>	[...]	<b>[10-20]</b>
<b>Others</b>	[...]	<b>[5-10]</b>	[...]	<b>[5-10]</b>
<b>Totals</b>	<b>300</b>	<b>100</b>	<b>178</b>	<b>100</b>
<b>(Figures may not add up due to rounding)</b>				

Source: BASF and Ciba actual sales. Market volumes and competitor data: BASF and Ciba best estimates.

224. The parties argue that the transaction does not raise any competition concerns with respect to UV filters. The products of Ciba and BASF would not be close substitutes to one another since BASF is mainly active in standard UV filters, whereas Ciba produces specialty products with high photo stability. In addition, in the parties' view post transaction the combined entity will be constrained by strong competitors in the UV filter market as well as by significant buyer power which is exercised by the customers.
225. The parties' contentions have not been confirmed by the market investigation. The market test has shown that irrespective of the level of the combined market shares of the parties post-transaction serious competition concerns arise due to the importance of patents for competition in the market.
226. When developing a UV filter formulation for the final product, cosmetics manufacturers have to take into account the level of protection against UVA as well as UVB radiation. The market investigation has shown that despite the fact that the above-mentioned Commission's Recommendation on the efficacy of sunscreen products is not binding, its provisions have been implemented by virtually all producers of cosmetics who, as a result, had to carry out a considerable re-formulation of their existing products in order to increase the level of UVA protection.
227. On the basis of the market investigation, to achieve a corresponding level of UVA protection, cosmetics manufacturers have four highly efficient UV filters at their disposal, which are available on the merchant market. For sunscreen products with a medium and high SPF a combination of at least two of these four is necessary to ensure that the UVA protection requirement is satisfied. This is not only due to their chemical properties but also due to existing maximum concentration limits set for each UV filter.
228. Three of these four UV filters, i.e. Tinosorb S, Tinosorb M and Uvinul A Plus, are patented and solely produced by BASF or Ciba. The fourth UV filter Avobenzone is off-patent and manufactured by several competitors of the combined entity. In addition, there is another efficient UV filter which allows producers to achieve a high protection level against UVA radiation: Neo Heliopan AP produced by Symrise. However, as this UV filter is only water-soluble and its combinations with several other UV filters are protected by blocking patents, its role on the market is limited. Furthermore, L'Oreal has developed and patented its own highly efficient UV filters, i.e. Mexoryl XL and Mexoryl SX, which it only uses captively. Therefore, these filters are not competing with the BASF and Ciba products on the merchant market.

*Serious doubts in UV filters for skin care*

229. The transaction would lead to a situation where manufacturers of sunscreen products with a medium and high SPF have to purchase at least one of the three specialty UV filters which are exclusive to the merged entity. On the basis of the market investigation, such a situation would significantly reduce the bargaining power of the customers and likely result in price increases of these UV filters. Moreover, the market test has shown that reducing the amount of these UV filters used in a UV formulations is possible only to a limited extent due to their unique characteristics. Therefore, their price increase would inevitably lead to higher prices of final sunscreen products.
230. Given these factors the Commission considers that the transaction raises serious doubts as to its compatibility with the common market in relation to UV filters..

### *Remedies*

231. To remove the serious doubts of the Commission with regard to UV filters for skin care, the parties proposed to conclude a UV filter licence agreement which would give a third party access to the technology behind Tinosorb S. In particular, the agreement shall consist of the transfer of a sole freely transferable licence without the right to grant sub-licences to two patents for the manufacture and sale of a UV filter product equivalent to Ciba's Tinosorb S in the EEA. In addition, the purchaser would be provided with all technical and safety information required for the production of Tinosorb S and would benefit from existing necessary authorisations for use of the UV filter granted by the competent administrative authorities in the EEA. Moreover, on request of the purchaser, BASF would provide Tinosorb S and its precursor product [...] for a transitional period of up to [...] on standard terms and conditions as well as technical assistance and access to the Ciba's relevant engineering expertise and technical training necessary to enable the licensee to manufacture the licensed UV filter and the product [...].

### *Results of the market test*

232. The market test has shown that the parties' initial proposal would not fully remove the serious doubts identified by the Commission. Firstly, according to the majority of respondents to the market investigation a licence which is limited to the EEA would not create a sufficient alternative to the merged entity. All major customers for UV filters are multinational companies which have global sourcing strategies. If the licence were limited to the EEA, these companies would have to rely on two supply sources which the market test showed to be inefficient. Consequently, the licensee would be at a disadvantage as compared to the merged entity and his volumes sold in the EEA would be reduced due to his inability to offer a worldwide supply of the UV filter. The results of the market investigation in this respect are in line with the Commission's previous findings indicating that a global geographic market definition for UV filters cannot be excluded. Secondly, respondents to the market test stressed that the licence should be royalty-free, not limited in time and should include patents related to the use of Tinosorb S in combination with other UV filters as well as its use in all applications. Finally, the market investigation has shown that the transitional period of up to [...] related to the toll-manufacturing agreement may not be sufficiently long to enable the licensee to establish himself in the business.

### *Assessment of the remedy*

233. To address the concerns which were raised during the market investigation with regard to the initial remedy proposal, the parties have agreed that the licence granted will be a freely transferable, sole<sup>57</sup>, fully paid-up, perpetual, royalty-free worldwide licence without the right to grant sub-licences. Moreover, to remove the concerns with respect to the length of the transitional period related to the toll-manufacturing agreement, the parties proposed to extend the period by [...] to a total of [...] at the option of the purchaser.

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<sup>57</sup> A proprietary right to exploit the product alongside the merged entity without the merged entity being able to grant any further licences or sub-licences.

234. In view of the fact that the market test has shown Tinosorb S to be the most successful UVA filter available in the market, and that the global licence which gives the licensee access to the technology behind the patented product and any and all combinations thereof is perceived by the market participants to be sufficient in order to ensure healthy competition in the EEA and global markets, the Commission considers that the commitment removes the identified serious doubts in this market.

## **6. PLASTICS AND COATINGS ADDITIVES**

235. In plastics and coatings additives the parties' activities overlap with respect to light stabilisers for plastics as well as photo initiators.

236. Light stabilisers are additives that are used to prevent chemical reactions that would otherwise degrade plastics and coatings when exposed to ultraviolet radiation or visible light. Photo initiators are chemical compounds used in radiation curing, a technology primarily used in the curing of coatings inks and adhesives and for the production and coating of electronic products.

### **6.1. HALS**

#### *Product market definition*

237. Hindered Amine Light Stabilisers ("HALS") are light stabilisers that are radical scavengers, i.e. additives that inhibit the propagation of free radicals within the substrate caused by light. HALS are used in plastics and coatings.

238. BASF submits that HALS should be distinguished from other light stabilisers for reasons of their different function and performance, different raw materials and processes used to produce light stabilisers. Further, BASF makes a distinction between HALS for plastics – where both parties are active – and HALS for coatings – where only CIBA is active. Within HALS for plastics, BASF considers that a further segmentation into "standard HALS" products and newer "NOR HALS" products would be required. Standard HALS should be divided into low molecular weight (LMW, less than 1000 g/mol) and high molecular weight HALS (HMW, more than 1000 g/mol).

239. BASF submits that the difference between standard HALS and NOR HALS lies in the different and more expensive technology used for the production of NOR HALS. Moreover, BASF points to substantial differences between LMW and HMW standard HALS from the supply and the demand side perspective, in particular to their supplementary functions as a result of which customers often use both products simultaneously.

240. The Commission dealt with light stabilisers in a previous case<sup>58</sup> but did not define the scope of the product market. The market investigation in this case clearly confirmed that HALS can be distinguished from other light stabilisers by means of product characteristics and by production process. The Commission therefore concludes that HALS are different from other types of light stabilisers.

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<sup>58</sup> M.3805 - Crompton / Great Lakes.

241. The market investigation further confirmed that there are differences between HALS for coatings and HALS for plastics. The majority of customers confirmed that the different products for coatings in general cannot be substituted by HALS for plastics and vice versa, even if to a limited extent LMW HALS could be used for both applications. Competitors confirmed that the production processes for HALS for plastics and HALS for coatings are different. Within HALS for plastics the market investigation indicates that a distinction between standard HALS and NOR HALS is required. Even though customers state that NOR HALS can be a substitute for non-NOR HALS products, NOR HALS is significantly more expensive. Also, standard HALS cannot be used for some NOR HALS applications, in particular pesticides or plastic films. Concerning the distinction within standard HALS for plastics in LMW and HMW as proposed by BASF, the market investigation confirmed that the product characteristics differ. In particular LMW HALS for plastics migrates to the surface of a product whereas HMW HALS for plastics stays within the bulk of the substrate. However, the precise product market definition can be left open since the concentration raises serious doubts under any reasonable alternative market definition and given that the proposed commitments will solve these competition issues in the overall HALS market as well as in any potential sub-segment thereof.

#### *Geographic market*

242. Concerning the geographic scope of the market, BASF considers that the market for HALS is at least EEA-wide. They claim that there is substantial intercontinental trade of HALS products; and that many customers would source from Chinese suppliers.

243. In the past, the Commission defined the relevant geographic market for light stabilisers as being at least EEA-wide<sup>59</sup>. The market investigation in the case at hand indicates that the market could indeed be wider than the EEA. Several customers source different types of HALS products outside the EEA. Many customers consider non-EEA producers for HALS as potential suppliers. At the same time, however, many customers state that prices in the EEA are higher than in other regions of the world. In any event, the precise scope of the geographic market can be left open since competition concerns arise under both alternatives and given that the proposed remedy will remove these concerns both for the EEA as well as worldwide.

#### *Assessment*

244. BASF is a minor player in the field of HALS. BASF produces one LMW HALS for plastic and one HMW HALS for plastics. In addition, BASF resells two LMW and one HMW HALS for plastic. BASF does not sell these products to coatings customers and it is not active in the production and sale of NOR HALS. BASF's overall sales in the year 2007 amounted to EUR [...] million worldwide and EUR [...] million in the EEA.

245. Ciba produces and sells a wide range of HALS for coatings and plastics, including NOR HALS. For NOR HALS Ciba holds a patent and is the only producer in the world apart from Adeka, a company which recently developed an alternative NOR HALS product. Ciba's overall sales of HALS for coatings and plastics amounted to EUR [...] million worldwide and EUR [...] million in the EEA.

246. For an overall market including HALS for coatings and plastics and NOR HALS BASF summarizes the market structure as follows:

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<sup>59</sup> M.3805 - Crompton / Great Lakes, para. 36.

All HALS for plastics and coatings applications (2007 figures)

<b>Suppliers</b>	<b>WW sales (€million)</b>	<b>WW market share (%)</b>	<b>EEA sales (€million)</b>	<b>EEA market share (%)</b>
BASF	[...]	[0-5]	[...]	[0-5]
Ciba	[...]	[40-50]	[...]	[40-50]
<b>Combined</b>	[...]	<b>[40-50]</b>	[...]	<b>[40-50]</b>
Cytec	[...]	[10-20]	[...]	[10-20]
Adeka	[...]	[5-10]	[...]	[0-5]
Chemtura	[...]	[5-10]	[...]	[10-20]
Sabo	[...]	[5-10]	[...]	[10-20]
Tiangang	[...]	[0-5]	[...]	[0-5]
Clariant	[...]	[5-10]	[...]	[5-10]
3V Sigma	[...]	[0-5]	[...]	[5-10]
Everlight	[...]	[0-5]	[...]	[0-5]
Others	[...]	[10-20]	[...]	[0-5]
<i>Totals</i>	<i>602.6</i>	<i>100</i>	<i>211</i>	<i>100</i>
<i>(Figures may not add up due to rounding)</i>				

Source: BASF and Ciba actual sales. Market volumes and competitor data: BASF and Ciba best estimates.

247. As regards LMW HALS for plastics, BASF estimates the combined market share in the EEA to be around [30-40] % (BASF [5-10] %, Ciba [20-30] %) and [30-40] % (BASF [0-5] %, Ciba [20-30] %) for a worldwide market with several competitors active on this market (in the EEA: Sabo [20-30] %, Cytec [10-20] %, Chemtura [10-20] %). The market size for the year 2007 is estimated at EUR 46 million in the EEA and EUR 128 million worldwide.
248. For HMW HALS for plastics BASF estimates the combined market share in the EEA as well as worldwide to be around [40-50] % (BASF [0-5] %, Ciba [40-50] %). The most important competitors would be Chemtura ([10-20] % in the EEA), Cytec ([10-20] % in the EEA), Sabo ([10-20] %) and 3V Sigma ([5-10] %). The market size for the year 2007 is estimated at EUR 131 million in the EEA and EUR 375 million worldwide.
249. BASF considers that the concentration will not give rise to an impediment of effective competition in the field of HALS for several reasons. BASF would not be a strong competitive force on the market for HALS. BASF would be a niche player and reseller of - few - commodity products. Under all potential market definitions the combined market shares would remain moderate and in all potential submarkets several viable competitors



would be active. For NOR HALS the transaction would not bring about any overlap of activities.

250. In addition, BASF argues that the current market shares would not reflect the competitive dynamics. In particular, Ciba's market position would be overstated since most of Ciba's products would have lost their patent protection over recent years. With the patent expiry, other producers started and will continue to copy more of Ciba's products. As a consequence, Ciba's market share would have declined in past years and prices for HALS decreased by [20-30] % over the period 2002-2006. This tendency would continue and forecasts for 2009 would indicate a further drop in prices for HALS.
251. The Commission's market investigation revealed that BASF overestimates the sales of BASF's and Ciba's competitors in all relevant potential HALS segments. Based on the sales data provided by the parties' competitors the market size(s) are significantly lower which also means that the market shares of the parties are in fact significantly higher than estimated. In an overall EEA market for all HALS products the combined market share of BASF and Ciba is ca. 50-60%. In the segment for LMW HALS for plastics the combined market share of the parties is ca. 30-40% in the EEA and in HMW HALS for plastics the combined market share is 50-60% in the EEA. The market shares are within similar ranges at worldwide level. Apart from the fact that the market shares of the parties are higher than they estimated, several respondents to the market investigation expressed the view that Ciba already holds a very strong market position which would be reinforced by combining BASF and Ciba.
252. At the same time the Commission notes that many respondents to the market investigation confirmed that BASF is a minor player for HALS products. Several customers indicated that they have other potential suppliers for the types of HALS products which meet their needs. Some respondents indicated that Ciba's strong market position could be transitory due to the expiry of patents.
253. However, in view of the already very high market share of Ciba in an overall market for all HALS products and in the segment of HMW HALS for plastics and the additional increment leading to a further increase of market share for the merged entity, the Commission considers that the transaction raises serious doubts as to its compatibility with the common market in relation to HALS.

*Commitments submitted by BASF*

254. In order to address the Commission's serious doubts BASF proposed to divest Ciba's entire Chimassorb 119 FL business which is a part of the HMW HALS market segment. The divestment consists of Chimassorb 119 FL Production Assets, relevant know how and customer lists. The package also includes a supply contract for the raw material [...] (together "Divestment Business HALS").
255. BASF has informed the Commission that the Divestment Business HALS represents a larger business than the current HALS business of BASF. BASF consider that the divestment will therefore result in the elimination of the addition in market share caused by the concentration and remove the competition concerns.
256. The Commission has market tested the proposed commitment in order to evaluate its suitability to remove the competition concerns. In the market investigation several respondents indicated that the dependence of the purchaser on supplies of [a product] puts into question the viability of the Divestment Business HALS. Some respondents

stated that the overall business would be too small to compete effectively with BASF/Ciba.

257. To dispel these concerns, BASF undertakes to supply the purchaser, at the latter's request, with [a product] in a yearly amount equal to at least the yearly average of Ciba's purchases of [a product] from BASF over the last [...] years based on a pricing formula linked to raw material costs<sup>60</sup>.
258. The Commission has assessed the suitability of an upfront buyer for the proposed Divestment Business and considers that it is a viable purchaser, with an established position in the market. It has informed the Commission that the Chimassorb 119 business is a very attractive commercial opportunity to expand at a global level.
259. In view of the fact that the proposed divestment removes at least the entire overlap resulting from the concentration and since the supply contract for [a product] addresses the concerns about the viability of the Divestment Business HALS, the Commission considers the commitment sufficient to remove the competition concerns in the overall market for HALS and in the potential segment for HMW HALS for plastics.

## **6.2. UV absorbers – BPO and BTZ**

260. UV absorbers are a type of light stabilisers. The parties' activities overlap with regard to the sale of two types of UV absorbers: BPO and BTZ. Ciba produces and sells a wide range of UV absorbers. BASF it is active only as a reseller of these products.

### *Relevant Product market*

261. UV absorbers are additives for plastic and other applications which have a greater UV absorption capacity than the substrate they are added to and dissipate the absorbed energy without harm to the polymer. The following main compounds can be distinguished Benzotriazoles ("BTZ"), benzophenones ("BPO"), benzylidene malonates ("BM"), hydroxyphenyl-s-triazines ("HPT"), cyanoacrylates ("Cy") and oxalanilides ("OA").
262. BASF submits that the compounds have significant differences in chemical structure, different production processes and different pricing patterns. BPO and BTZ are broadband absorbers but BPO are more effective on shorter wavelengths and BTZ on higher wavelengths. These products are mainly be used to protect polyethylene ("PE") and polypropylene ("PP"). Concerning the production process, BASF submits that there is no significant supply-side substitutability. In particular, BPO and BTZ are manufactured on the basis of different input chemicals and are produced on different manufacturing lines. Due to the different product characteristics and the different production processes BPO and BTZ belong to different product markets.
263. BASF considers that the markets for BPO and BTZ should be further sub-divided by applications. For BPO a distinction should be made between BPO for plastics and BPO used for other applications including coatings and personal care products. BPO molecules used in plastics would generally be different from those used in other applications and the production chain would be different. For BTZ, for the same reasons, a distinction should

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<sup>60</sup> [...].

be made between BTZ for plastics and BTZ for other applications including coatings, inks and electronics.

264. The Commission dealt with BPO and BTZ in the past<sup>61</sup>. However, the precise product market definition was left open. In the market investigation in the case at hand, competitors and customers confirmed that UV absorbers have significant differences in their chemical structure and their production process. However, for BPO and BTZ several customers indicated that it would be possible to substitute BPO by BTZ and vice versa. With regard to the potential further sub-segmentation by application almost all responding customers and most competitors did not agree with BASF's view that there are significant differences concerning product characteristics of BTZ for plastics and for other applications. In any event, the precise product market definition can be left open since the transaction will not cause any significant impediment to effective competition under any potential product market definition.

#### *Relevant geographic market*

265. Concerning the scope of the geographic market, BASF submits that the market is at least EEA-wide. Ciba would supply these products mainly from Europe all over the world and there would be substantial imports into the EEA.
266. In the past the Commission defined the market for light stabilisers including BPO and BTZ as at least EEA-wide<sup>62</sup>. The market investigation in the case at hand was not conclusive as to the geographic scope of the markets for BPO and BTZ. While many customers stated that they source the products from Asian producers for use in the EEA they noted that prices in the EEA are substantially higher than outside. In any event, the precise geographic scope of the market can be left open since the transaction will not lead to competition concerns on a worldwide level or for an EEA-wide market.

#### *Assessment*

267. BASF manufactures one type of UV absorbers, Cy, which is not manufactured by Ciba. Apart from this activity BASF is not active in the manufacture of any UV absorber. Its activities are limited to the resale of BPO and BTZ.
268. Ciba produces and sells BPO, BTZ as well as HPT. It sells its BPO and BTZ for coatings and several other applications. BASF only markets its products to plastics customers. However, BASF does not exclude that some customers use the products for other applications such as coatings.
269. Since the parties' activities overlap only with regard to BPO and BTZ competition concerns can be excluded for other types of UV absorbers.

#### *BPO*

270. BASF considers that the combined market share in the market for the sale of BPO for plastics and coatings is [20-30] % in the EEA (BASF [0-5] %, Ciba [20-30] %) and [20-30] % worldwide (BASF [5-10] %, Ciba [10-20]%). Most important competitors in the EEA and worldwide would be Cytec with an estimated market share of [10-20] % in the

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<sup>61</sup> M.3805 Crompton / Great Lakes.

<sup>62</sup> M.3805 Crompton / Great Lakes, para. 36.

EEA and [20-30] % worldwide as well as Chemtura with an estimated market share of [5-10] % in the EEA and [10-20] % worldwide. The market sizes for the overall BPO market in the EEA and worldwide are estimated at EUR 22 million and EUR 77 million respectively.

271. For the plastics' application segment, BASF estimates the combined market share at [30-40] % in the EEA (BASF [5-10] %, Ciba [20-30] %) and [20-30] % worldwide (BASF [10-20] %, Ciba [10-20] %). The most important competitors in the EEA and worldwide are Cytec ([10-20] % EEA, [20-30] % world) and Chemtura ([10-20] % EEA, [10-20] % world). The market size for the plastics segment is estimated at EUR 15 million in the EEA and EUR 60 million worldwide. In the coatings' application segment, the transaction does not lead to any overlap as BASF does not sell its BPO products to coatings customers.
272. BASF considers that the concentration will not lead to any competition concerns for BPO. BASF is mainly active in the BPO market through the resale of spot purchases of copies of Ciba products belonging to the low end of the market which allows BASF to complement its portfolio of plastic additives. Therefore, the combination of BASF and Ciba would not eliminate any significant competitive constraint that existed on either party prior to the concentration. BASF considers that if it were to decide to no longer source the limited amount of spot sales of BPO, the relevant Asian producers ([...]) could enter the EEA market themselves either through distributors or through direct subsidiaries. In addition, post transaction several significant competitors would remain active on the market.
273. The vast majority of respondents to the Commission's market investigation considered that the impact of the transaction in the field of BPO is minimal. In particular, Asian producers did not express any concern that the supply of their BPO product to the EEA could be impeded as a result of the transaction. In view of the moderate combined market shares of the parties and the fact that several significant competitors are active on the market the Commission concludes that the transaction does not lead to a significant impediment to competition with regard to BPO.

#### *BTZ*

274. Ciba produces and sells BTZ. BASF does not produce BTZ but only makes spot sales of copies of Ciba products [...].
275. Based on a market including both sales by producers of BTZ and resellers of BTZ, BASF estimates the combined market share in an overall market for BTZ at [50-60] % in the EEA (BASF [0-5] %, Ciba [50-60] %) and [40-50] % worldwide (BASF [0-5] %, Ciba [40-50] %). The most important competitors in the EEA are Chemtura with an estimated market share of [10-20] % followed by Everlight with an estimated market share of [5-10] % in the EEA. On a worldwide scale the most important competitor would be Cytec with an estimated market share of [10-20] % and Everlight with an estimated market share of [5-10] %. The market size is estimated at EUR 103 million in the EEA and EUR 370 million worldwide. Based on a separate production market for BTZ, there would be no overlap of the parties activities and BASF estimates Ciba's market share to be below [10-20] % in the EEA and to be about [20-30] % worldwide. The most important producers are Everlight and Adeka.
276. In the BTZ plastics' segment (direct sales from producers as well as sales by re-sellers), BASF estimates the combined market share to be [40-50] % in the EEA (BASF [5-10] %, Ciba [40-50] %) and [30-40] % worldwide. The most important competitors are Chemtura

([20-30] % in EEA, [5-10] % worldwide), Cytec ([5-10] % EEA, [10-20]% worldwide) and Everlight ([10-20] % EEA, [5-10] % worldwide). The market size is estimated at EUR 67 million in the EEA and EUR 213 million worldwide. Ciba also sells its BTZ products for a number of other applications, i.e. coatings, inks and printing, electronics and home and personal care products. However, the transaction does not lead to any overlap with regard to these applications as BASF only markets its products to plastics customers.

277. BASF considers that the transaction will not have any significant impact on the market for BTZ. Since BASF would be active only as a reseller of copies of Ciba products purchased from the Asian producers [...]. BASF would not have exercised any significant constraints in the market. Post-transaction several competitors which are producers of BTZ would remain on the market, in particular Chemtura and Cytec. BASF considers that its Asian suppliers of BTZ would easily find other means to market their product should BASF decide to stop reselling BTZ.
278. In addition, BASF considers that the market shares would overestimate Ciba's position on the market. Ciba's market share would be declining and its innovative role in the early days of the product would be the past. In the future there would no longer be any patent protection for BTZ and Asian low cost producers would exercise strong competitive pressure.
279. The vast majority of respondents to the Commission's market investigation stated that the concentration will not cause any concerns for BTZ. In addition, the Commission's investigation indicates that Asian producers of BTZ have alternative means to distribute their product in the EEA than via BASF.
280. The Commission notes that on a separate *production* market the transaction would not bring about any overlap of the parties activities and that Ciba's market share on the production market would be small. For the BTZ market comprising direct sales and sales via resellers the Commission notes that the market shares in the case are not fully indicative because being a reseller BASF can only exercise limited constraints. In addition, the Commission notes that the Asian suppliers of BASF have alternative means to supply to the EEA so that the transaction will not remove any competitive constraint on the merged entity in the field of BTZ.
281. In consequence, the Commission considers that the effects of the transaction in the market for BTZ are minor and that it will not cause a significant impediment of effective competition.
282. Since the transaction does not lead to competition concerns in the market for BPO and BTZ, such concerns would also not arise for a market comprising both products.

### **6.3. Photo initiators**

283. Both parties are active in the field of photo initiators. BASF manufactures and sells one type of photo initiator, triphenylphosphine oxide ("TPO"). Ciba produces a wide range of photo initiators. Ciba recently acquired the Italian company Lamberti, another producer of photo initiators. Neither Ciba nor Lamberti manufacture TPO; both are active as a reseller for this product.

*Relevant product market*

284. Photo initiators are chemical compounds used in radiation curing a technology primarily used in the curing of coatings, inks and adhesives and for the production and coating of electronic products. Photo initiators convert energy from radiation into either free radicals or cations which then start polymerisation. Photo initiators are added to a base oligomer, a reactive monomer or other specialised additives and pigments. The composition of radiation curable formulations may vary significantly from application to application depending on the requirements of the final product.
285. BASF submits that photo initiators constitute a separate market from additives used in other curing techniques as well as from other plastics and coatings additives due to their specific characteristics. BASF further considers that within the overall market of photo initiators different product markets for individual products exist. In any event, BASF considers that it is not necessary to take a final position on this since the overlap between the activities of the parties is limited to one type of photo initiator: triphenylphosphine oxide ("TPO").
286. TPO is applied to pigmented coatings especially for highly white or transparent surfaces. The product is off-patent since 2001 and is sold under the trade name Lucrin TPO and Lucrin TPO-L. BASF submits that TPO is specifically adapted for the curing of (white) pigmented varnishes without any yellowing as well as for applications requiring fast curing speeds. It therefore could neither be replaced by less effective photo initiators used for non-pigmented systems nor by photo initiators which result in yellowing.
287. The Commission has not yet assessed the market or markets for photo initiators. In the market investigation for this case respondents confirmed the differences between different types of photo initiators in terms of product characteristics and production process. However, concerning TPO, several customers and competitors considered that TPO can be substituted by "BAPO" and in particular the product "Irgacure 819". However, the further investigation revealed that BAPO/Irgacure 819 is patent protected and several times more expensive than TPO. Customers confirmed that for economic reasons they do not consider BAPO/Irgacure 819 as a substitute for TPO.
288. In view of this, the Commission concludes that BAPO/Irgacure 819 does not belong to the same product market as TPO and that TPO represents a separate product market.

#### *Relevant geographic market*

289. BASF submits that the geographic market for photo initiators and TPO is at least EEA-wide. Suppliers of photo initiators would distribute their products worldwide from very few production sites, mostly in Eastern Asia. Ciba and BASF would currently only manufacture in Europe and deliver their products worldwide. At least within Europe, Asia and America the competitive conditions and the consumption habits of the buyers are comparable. Transport costs are low and the production and distribution of photo initiators are also not subject to specific regulatory requirements.
290. The Commission did not yet assess the market for photo initiators. The market investigation in this case confirmed that many customers in the EEA source photo initiators worldwide, in particular from Eastern Asia. However, one customer considers that prices in the EEA are higher than in other parts of the world. The precise scope of the geographic market can be left open since the transaction will not lead to competition concerns.

#### *Assessment*

291. BASF produces only one type of photo initiator, TPO. Ciba/Lamberti is active in the production and sale of a wide range of photo initiators. However, in relation to TPO, Ciba only acts as a reseller of BASF's product. Lamberti does not produce any TPO either and acts only as a reseller for TPO mainly sourced from ChemFine International as well as occasional purchases from BASF and other suppliers.
292. For TPO, BASF estimates the parties' combined market share in the EEA for a market comprising direct sales of producers and sales by resellers at [50-60] % (BASF [40-50]%, Ciba [5-10]%, Lamberti [0-5] %). Most important competitors in the EEA would be IHT with an estimated market share of [20-30] %, New Sun ([10-20] %) and Tianjin Jiury ([5-10] %). The market size is estimated at EUR 7.6 million for the year 2007. Based on a *production* market for TPO the market share of BASF is estimated at [50-60] % in the EEA and [40-50] % worldwide with IHT, New Sun and Tianjin Jiury as most important competitors.
293. BASF considers that the transaction will not lead to a significant impediment of effective competition in the market for TPO in view of the fact that Ciba only acts as a reseller of BASF's product and that the overall amounts are small so that Ciba could easily be replaced by other suppliers.
294. Due to the fact that Ciba is active only as a reseller of BASF's product the competitive constraint on BASF by Ciba is limited. Lamberti is not active as producer either. Lamberti's sales of TPO are small and the Commission does not have any indication that the producers supplying Lamberti would not be able to find other means to supply the market than selling through Lamberti. In view of this the Commission considers that the concentration does not lead to competition concerns in the market for TPO

## **B. Vertical Relationships**

295. The transaction involves a large number of vertically related markets. The Commission has assessed these relationships and arrived at the conclusion that for most of the vertical relationships foreclosure issues are excluded since the total purchases or sales of many of these products by one of the parties are minor and therefore the concentration will not impact on the future behaviour of the combined entity. In addition, there are several vertical relationships where the factual situation renders it unlikely that the concentration will have an impact on the competitive structure of the market (e.g. the total demand of one party significantly lower than the production of the other party or where the purchases of one party significantly exceeded the total production of the other party or where the Commission identified several other suppliers of the same product or where an input represented only a very minor portion of the production costs) of another product. The remaining markets are described in more details in the following paragraphs.

### **1. Methyl Acrylates ("MA") – DMA3, phenolic antioxidants and acrylate monomers**

#### *MA (upstream product)*

296. MA which is produced by BASF is a potential input product for DMA3, phenolic antioxidants and for acrylate monomers which are produced by Ciba or both parties.
297. MA is a commodity acrylate ester. It is mainly used as an input for the production of polyacrylonitrile fibres, synthetic latex polymers, DMA3, acrylate monomers and phenolic antioxidants.

298. BASF considers that it can be left open whether MA represents a product market on its own or whether other products should be considered as belonging to the product market as the transaction would not raise concerns under any market definition.
299. The Commission dealt with MA in a previous decision<sup>63</sup> and concluded that it constitutes a separate relevant product market. It has also dealt with other types of acrylate esters<sup>64</sup> and concluded that they represent separate product markets.
300. Concerning the scope of the geographic market, BASF considers that the market is worldwide. MA is a commodity product which is traded globally and a significant amount of MA is imported into the EEA. Also, the cost of transport is low.
301. The Commission considers that the geographic market definition can be left open as the transaction will not lead to competition concerns on global or EEA level.

*DMA3 (downstream product)*

302. The Commission has dealt with the market for DMA3 in paragraphs 9-13 above arriving at the conclusion that DMA3 represents a separate product market from DMA3 quat. The geographic market definition is left open and could be the EEA or worldwide.

*Phenolic antioxidants (downstream product)*

303. Phenolic antioxidants are substances that retard the oxidative degradation of plastics. They are used in a broad variety of applications including plastics, rubber, fuels etc. Antioxidants are classified as primary antioxidants and secondary antioxidants. For primary antioxidants two main sub-categories can be distinguished depending on the base chemicals they are derived from. These sub-categories are phenolic antioxidants and aminic antioxidants. BASF submits that only phenolic antioxidants can be produced from MA. However, phenolic antioxidants could also be produced by using alternatives to MA.
304. The Commission considered in the past that primary and secondary antioxidants belong to separate product markets<sup>65</sup>. It was left open whether phenolic antioxidants constitute a single relevant product market or whether a further distinction should be made between the various grades of phenolic antioxidants. As the grades accounting for the large majority of sales have the same or very similar functions and applications for the purposes of this case it is not necessary to consider any further sub-division of phenolic antioxidants.
305. Concerning the geographic scope of the market BASF considers that the market is worldwide. The Commission considers that the scope of the geographic market can be left open as the transaction will not lead to competition concerns whether the relevant geographic market is considered to be the EEA or global.

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<sup>63</sup> M.5424 - DOW/R&H.

<sup>64</sup> COMP/M.3056 Celanese/Degussa/JV.

<sup>65</sup> COMP/M.3805 – Crompton/Great Lakes.



*Acrylate monomers (upstream product)*

306. Acrylate monomers are products used in polymers that have a very wide range of applications including aircraft lubricant additives, adhesives, coatings etc. In a previous decision<sup>66</sup> the Commission left open whether each monomer considered in that case (including acrylate monomers) constitutes a single relevant product market. In the same decision the Commission indicated that the relevant geographic market for acrylate monomers is larger than the EEA.

307. For MA the market structure has been described in paragraphs 296-301 above. The precise geographic market definition for MA can be left open in this case as the transaction will not lead to competition concerns on either an EEA or a global basis.

*Assessment MA - DMA3*

308. BASF submits that the market structure for MA is as follows:

MA (2007 figures)

<b>MA (2007 figures)</b>				
<b>Suppliers</b>	<b>WW sales (€ million)</b>	<b>WW market share (%)</b>	<b>EEA sales (€ million)</b>	<b>EEA market share (%)</b>
<b>BASF</b>	[...]	<b>[20-30]</b>	[...]	<b>[50-60]</b>
Hexion	[...]	[0-5]	[...]	[10-20]
Arkema	[...]	[5-10]	[...]	[10-20]
Aktilat	[...]	[0-5]	[...]	[0-5]
DOW/R&H	[...]	[10-20]	[...]	[0-5]
LG Chem	[...]	[5-10]	[...]	[0-5]
Chinese and Taiwanese suppliers	[...]	[10-20]	[...]	[0-5]
Others	[...]	[10-20]	[...]	[0-5]
<i>Total</i>	<i>310</i>	<i>100</i>	<i>63</i>	<i>100</i>
<i>(Figures may not add up due to rounding)</i>				

*Source: BASF and Ciba actual sales. Market volumes and competitor data: BASF and Ciba best estimates.*

309. For DMA3 the market structure has been described in paragraphs 9-13 above.

310. BASF consider that input or customer foreclosures are excluded. Ciba would already be BASF's largest customer (BASF covers more than [80-90] % of Ciba's current total demand for MA). Also, BASF would lack the ability to foreclose input since most DMA3 producers are backwards integrated and use their own MA captively. In any event there are ample sourcing opportunities for MA and competitors could source MA from strong players including Arkema or DOW/R&H. Also, there is excess capacity for the production of MA. In addition, Ciba is the only significant BASF customer that

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<sup>66</sup> M.3001 Celanese/Clariant Emulsion business

uses MA for the production of DMA3. None of BASF's other main customers purchasing ca. [60-70] % of BASF's total MA production are active in DMA3.

311. The Commission's market investigation confirmed that there are other suppliers of MA active on the market. In view of this the Commission considers that BASF lacks the ability to foreclose input or to raise prices for MA vis-à-vis DMA3 producers. Customer foreclosure can be excluded since Ciba is already an important customer and purchases about [80-90] % of its total MA demand from BASF. Ciba's total purchases of MA from BASF equal [40-50] % of BASF's MA. As set out above [paragraph 16] Ciba has comparatively modest market shares for DMA3 ([5-10] % world wide and below [5-10] % in the EEA). After the implementation of the DMA3 undertaking the merged entity will only retain the Ciba DMA3 business. There will therefore be little incentive to foreclose.
312. The Commission therefore concludes that the concentration does not give rise to serious doubts as to its compatibility with the common market in relation to MA and DMA3.

*Assessment MA – phenolic antioxidants*

313. BASF submits that the market structure for phenolic antioxidants is as follows:

Phenolic antioxidants (2007 figures)

<b>Phenolic antioxidants (2007 figures)</b>				
<b>Suppliers</b>	<b>WW sales (€ million)</b>	<b>WW market share (%)</b>	<b>EEA sales (€ million)</b>	<b>EEA market share (%)</b>
Ciba	[...]	[30-40]	[...]	[30-40]
Songwon	[...]	[10-20]	[...]	[10-20]
Chemtura	[...]	[10-20]	[...]	[10-20]
Everspring	[...]	[10-20]	[...]	[10-20]
Albemarle	[...]	[10-20]	[...]	[10-20]
Others	[...]	[10-20]	[...]	[10-20]
<i>Total</i>	<i>1103</i>	<i>100</i>	<i>306</i>	<i>100</i>
<i>(Figures may not add up due to rounding)</i>				

*Source: BASF and Ciba actual sales. Market volumes and competitor data: BASF and Ciba best estimates*

314. The Commission considers that in view of the fact that there are several other suppliers of MA, BASF lacks the ability post transaction, to foreclose input or to raise prices for MA. Also customer foreclosure can be excluded since Ciba is already purchasing about [80-90] % of its demand of MA from BASF. The Commission therefore concludes that the concentration does not give rise to serious doubts as to its compatibility with the common market in relation to MA and phenolic antioxidants or any wider market definition.

*Assessment MA – acrylate monomers*

315. BASF describes the market structure as follows:

Acrylate monomers (2007 figures)

Suppliers	WW sales (€ million)	WW market share (%)	EEA sales (€ million)	EEA market share (%)
Ciba	[...]	[0-5]	[...]	[0-5]
BASF	[...]	[5-10]	[...]	[5-10]
<b>Combined</b>	[...]	<b>[5-10]</b>	[...]	[5-10]
Sartomer	[...]	[20-30]	[...]	[20-30]
Cytec	[...]	[10-20]	[...]	[10-20]
Cognis	[...]	[10-20]	[...]	[10-20]
Evonik	[...]	[10-20]	[...]	[20-30]
Arkema	[...]	[5-10]	[...]	[5-10]
Eternal	[...]	[5-10]	[...]	[0-5]
Miwon	[...]	[0-5]	[...]	[0-5]
Mitsubishi	[...]	[5-10]	[...]	[0-5]
Asahi Glass	[...]	[0-5]	[...]	[0-5]
NOF	[...]	[0-5]	[...]	[0-5]
Others	[...]	[5-10]	[...]	[0-5]
<i>Total</i>	<i>277</i>	<i>100</i>	<i>150</i>	<i>100</i>
<i>(Figures may not add up due to rounding)</i>				

Source: BASF and Ciba actual sales. Market volumes and competitor data: BASF and Ciba best estimate.

316. The Commission considers that in view of the fact that there are several other suppliers of MA, BASF lacks the ability post transaction, to foreclose input or to raise prices for MA. Also customer foreclosure can be excluded since Ciba is already purchasing about [80-90] % of its demand of MA from BASF. On a product market for all acrylate monomers (including MA) the market shares are much lower, less than [10-20] % on both the EEA and global markets. Therefore the competition analysis is unchanged on this wider market. The Commission therefore concludes that the concentration does not give rise to serious doubts as to its compatibility with the common market in relation to MA and acrylate monomers.

## 2. Di-methylamine ("DMA") – DADMAC, Polyamines ("PAm")

*DMA (upstream product)*

317. BASF produces DMA which is an input product for DADMAC and PAm. Both parties produce DADMAC, PAm is produced only by Ciba.

318. DMA - like other methylamines that are derived from the reaction of ammonia and methanol - is a versatile basic chemical product and used in several applications. The largest application for DMA includes organic solvents, surfactants, DMAE and agrochemicals.

319. BASF considers that DMA belongs to a wider product market comprising all methylamines and that the geographic scope of the market is the EEA as DMA is a hazardous product and costly to transport. In the Commission's market investigation several respondents indicated that despite the fact that DMA is a hazardous product it can be transported over long distances. However, at the same time respondents indicated that such transport would not be economically reasonable.

320. The Commission considered the relevant product market definition for methylamines in its decision in *CVC/Univar*.<sup>67</sup> The Commission left open the question of the relevant product markets in *CVC/Univar* as that transaction did not result in competition concerns, irrespective of the market definition. Also in this case the product (methylamines or DMA) and geographic market for methylamines (EEA or global) market definitions can be left open as the transaction will not lead to competition concerns under any of these alternative market definition. In regard to DMA the Commission considers that the relevant geographic market is the EEA as the transport costs of this dangerous chemical make sales between different world regions uneconomic.

*DADMAC (downstream product)*

321. The Commission has described the market for DADMAC in paragraphs 27-31.

*PAm (downstream product)*

322. Ciba uses DMA as an input for PAm. In 2006 Ciba sold its Textile Effects Business to Huntsman<sup>68</sup> and no longer produces PAm itself but procures all PAm from Huntsman through tolling arrangements.

323. PAm is a flocculent and coagulant that is used in water treatment and in paper applications. BASF considers that the product and geographic market definition can be left open since the transaction does not raise competition concerns under any possible market definition.

324. In the case *Veba/Degussa*<sup>69</sup> the Commission considered a market for PAm and diamines. Concerning the scope of the geographic market the Commission considered a market for PAm and diamines which is at least EEA wide. In this case, the product and geographic market definition can be left open since the transaction will not lead to competition concerns.

*Assessment DMA - DADMAC*

325. BASF describes the market structure for DMA and for methylamines as follows:

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<sup>67</sup> See Commission decision of 17 September 2007, Case No COMP/M.4836 – *CVC/Univar*.

<sup>68</sup> COMP/M.4179 *Huntsman/Ciba TE Business*.

<sup>69</sup> COMP/M942 *Veba/Degussa*.

### Sales and market shares for DMA (2007 figures)

Supply of DMA (2007 figures)				
Suppliers	WW sales (€ million)	WW market share (%)	EEA sales (€ million)	EEA market share (%)
<b>BASF</b>	[...]	<b>[10-20]</b>	[...]	<b>[20-30]</b>
Taminco	[...]	[30-40]	[...]	[50-60]
Ertisa	[...]	[0-5]	[...]	[10-20]
Balchem	[...]	[0-5]	[...]	[5-10]
DuPont	[...]	[20-30]	[...]	[0-5]
Chinese producers	[...]	[10-20]	[...]	[0-5]
Others	[...]	[5-10]	[...]	[0-5]
<i>Total</i>	<i>150</i>	<i>100</i>	<i>35</i>	<i>100</i>
<i>(Figures may not add up due to rounding)</i>				

Source: BASF and Ciba actual sales. Market volumes and competitor data: BASF and Ciba best estimates

326. For a wider methylamines market, BASF estimates the market structure as follows:

### Sales and market shares for methylamines (2007 figures)

Methylamines (2007 figures)				
Suppliers	WW sales (€ million)	WW market share (%)	EEA sales (€ million)	EEA market share (%)
<b>BASF</b>	[...]	<b>[10-20]</b>	[...]	<b>[30-40]</b>
Taminco	[...]	[40-50]	[...]	[40-50]
Ertisa	[...]	[0-5]	[...]	[10-20]
Balchem	[...]	[0-5]	[...]	[5-10]
DuPont	[...]	[20-30]	-	-
Chinese producers	[...]	[10-20]	-	-
Others	[...]	[5-10]	-	-
<i>Total</i>	<i>270</i>	<i>100</i>	<i>52</i>	<i>100</i>
<i>(Figures may not add up due to rounding)</i>				

Source: BASF and Ciba actual sales. Market volumes and competitor data: BASF and Ciba best estimates

327. Concerning DADMAC it has been stated above that BASF stopped selling DADMAC to the merchant market in 2008. In addition, BASF considers that no foreclosure issues arise since Ciba produces DADMAC only in the United States and since DMA would not be shipped intercontinentally. Therefore BASF would need to sell its ca. [20-30] % excess production of DMA in the EEA to the merchant market and could not use it for Ciba's DADMAC production in the United States. For the same reason, the transaction could not lead to a customer foreclosure.

328. The market investigation has shown that it is not economic for BASF to ship its DMA to the United States thus confirming that the relevant geographic market is limited to the EEA. There is thus no possibility of foreclosure as BASF must sell its DMA in

Europe and Ciba must purchase its DMA in the United States. The Commission therefore concludes that the concentration does not give rise to serious doubts as to its compatibility with the common market in relation to DMA and DADMAC or in relation to DMA and poly-DADMAC.

*Assessment DMA - PAm*

329. Concerning PAm BASF submits that the market structure is the following:

**Sales and market shares for PAm (2007 figures)**

Name of downstream product (2007 figures)				
Suppliers	WW sales (€ million)	WW market share (%)	EEA sales (€ million)	EEA market share (%)
Ciba	[...]	[10-20]	[...]	[10-20]
SNF Floerger	[...]	[20-30]	[...]	[20-30]
Kemira	[...]	[10-20]	[...]	[10-20]
Nalco	[...]	[10-20]	[...]	[5-10]
Huntsman	[...]	[0-5]	[...]	[10-20]
Cytec	[...]	[0-5]	[...]	[5-10]
Others	[...]	[5-10]	[...]	[5-10]
<i>Total</i>	<i>147.9</i>	<i>100</i>	<i>41.5</i>	<i>100</i>
<i>(Figures may not add up due to rounding)</i>				

*Source: BASF and Ciba actual sales. Market volumes and competitor data: BASF and Ciba best estimates*

330. Ciba is only a small customer for methylamines accounting for just [0-5] % of BASF's total EEA sales of DMA in 2007. BASF also supplies methylamines (including DMA) to a number of other customers for various other applications. BASF submits that even if BASF wanted to supply all of Ciba's DMA demand (of approx. [0-5] kt), as well as its own (approx. [20-70] kt), BASF would still want to supply its remaining existing DMA customer base (having an EEA output of [50-100] kt in 2007 and a capacity of [50-100] kt for DMA). BASF's market shares on the wider market for methylamines are similar to those on the market for DMA, so that the same market analysis applies. Based on BASF submissions the Commission considers that the merged entity would therefore have no incentive to raise downstream PAm producers costs or impose less favourable conditions on them.

331. Similarly, the combined entity would not have the ability or the incentive to foreclose upstream producers from access to the downstream market by reducing its purchases of methylamines (including purchases of DMA) from the combined entity's upstream DMA competitors. Huntsman, the toll manufacturer for Ciba's PAm, sources all of its EEA DMA needs for PAm from BASF and Taminco. Even if Huntsman sourced almost all of the DMA requirements from Taminco, Huntsman (on Ciba's behalf) would still be a very small customer on the total methylamines market (given Ciba's moderate PAm market share). Thus, even if the merged entity in the future supplied the DMA needed for this PAm production, Taminco would have no difficulties selling these small volumes to other customers.

332. In view of the fact that there are several other producers of DMA and the fact that Ciba's needs for PAm are small the Commission therefore concludes that the

concentration does not give rise to serious doubts as to its compatibility with the common market in relation to DMA and PAm.

### 3. DMAE/AAA – DMA3

333. The Transaction will lead to a vertical integration between BASF's production of alkylalkanolamines (*AAAs*) including dimethylethanolamine (*DMAE*), and Ciba's activities in DMA3, for which these are input products.

#### *DMAE/AAA – DMA3 (upstream product)*

334. BASF considers that all AAA should be considered as relevant product market. AAA is a group of products, which is comprised of Methyldiethanolamine (*MDEA*), Methylethanolamine (*MMEA*), DMAE and some smaller products. This group is defined by its production technology – reaction of methylamines with ethyleneoxide. The largest applications for AAAs are the production of flocculant polymers which are used in waste water treatment, gas scrubbing, surfactants, polyurethane catalysts, ion exchange resins and coating systems.

335. DMAE is a versatile chemical product that is used in several applications. The largest application is the production of flocculant polymers used in waste water treatment systems. Further uses of DMAE include polyurethane catalysts, ion exchange resins and coating systems. BASF sells DMAE into all of these applications.

336. Concerning the relevant geographic market BASF considers that the market is worldwide. AAAs could be shipped within regions and overseas without major hurdles.

337. The Commission considered the relevant product market definition for AAAs in its decision in *CVC/Univar* and *Huntsman/Ciba TE Business*.<sup>70</sup> Furthermore the UK Competition Commission defined AAA as the relevant product market<sup>71</sup>. In this case the product and geographic market definition can be left open, since the transaction will not lead to foreclosure issues whether the product market is defined as AAA or more narrowly as DMAE.

#### *DMA3 (downstream product)*

338. The market for DMA3 has been described in paragraphs 9-13 above.

#### *Assessment DMAE/AAA – DMA3*

339. BASF describes the market structure for the narrowest segment, DMAE, as follows:

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<sup>70</sup> See Commission decision of 17 September 2007, Case No COMP/M.4836 – *CVC/Univar*. COMP/M.4179 – *Huntsman/Ciba TE Business*.

<sup>71</sup> Final report of the UK Competition Commission in *Taminco/Air Products*, para. 4.64

### Sales and market shares for DMAE (2007 figures)

Supply of DMAE (2007 figures)				
Suppliers	WW sales (€ million)	WW market share (%)	EEA sales (€ million)	EEA market share (%)
<b>BASF</b>	[...]	<b>[20-30]</b>	[...]	<b>[30-40]</b>
Taminco	[...]	[50-60]	[...]	[60-40]
MGC	[...]	[5-10]	[...]	[0-5]
Nippon Shokubai	[...]	[0-5]	-	-
Huntsman	[...]	[0-5]	[...]	[0-5]
Others (incl. DOW/R&H, Arkema)	[...]	[5-10]	-	-
<i>Total</i>	<i>149.0</i>		<i>63.0</i>	
<i>(Figures may not add up due to rounding)</i>				

Source: BASF and Ciba actual sales. Market volumes and competitor data: BASF and Ciba best estimates

340. BASF considers that the combined entity would not have the ability or the incentive to raise downstream DMA3 producers' costs by restricting or foreclosing access to AAAs (including the DMAE segment) or by supplying downstream competitors at less favourable conditions. Even though DMAE is an important input for DMA3, the combined entity would not have sufficient market power in the supply of DMAE to foreclose downstream DMA3 competitors.
341. BASF considers that there are a number of other credible worldwide DMAE suppliers. Taminco is the market leader, with a worldwide value market share of [50-60] %, followed by other significant players such as MGC (with [5-10] %), Nippon Shokubai (with [0-5] %) and Huntsman (with [0-5] %), which would also offer credible alternatives. BASF's position is less than half the size of the market leader, Taminco, and so would be unlikely to be strong enough to foreclose downstream DMA3 competitors.
342. The ability of the merged entity to negatively affect the overall availability of DMAE for the downstream market of DMA3 in terms of price and quality would also be questionable in light of the amount of excess capacity that is available in the supply of DMAE. According to BASF competing producers could increase their output by an amount equivalent to BASF's merchant sales. BASF submits further that post-merger, any decision of the merged entity to rely on its own upstream DMAE supply, would also free up capacity for other DMAE suppliers from which Ciba currently purchases DMAE, including [...] and [...]. As AAAs (including for DMAE supply) is traded globally there should also be no difficulties for any producer supplying DMAE to be able to potentially supply any DMA3 customer around the world.
343. Equally, no foreclosure concerns would arise in a wider AAAs market, including MMEA, MDEA and DMAE, in view of the many players active on the market that is described by BASF as follows:



### Sales and market shares for AAAs (2007 figures)

AAAs (2007 figures)				
Suppliers	WW sales (€ million)	WW market share (%)	EEA sales (€ million)	EEA market share (%)
<b>BASF</b>	[...]	[10-20]	[...]	[20-30]
Taminco	[...]	[30-40]	[...]	[50-60]
DOW/R&H	[...]	[10-20]	[...]	[5-10]
Huntsman	[...]	[5-10]	[...]	[0-5]
Ineos	[...]	[5-10]	-	-
MGC	[...]	[5-10]	[...]	[0-5]
Others (incl. Arkema)	[...]	[5-10]	-	-
<i>Total</i>	<i>290</i>		<i>88</i>	
<i>(Figures may not add up due to rounding)</i>				

Source: BASF and Ciba actual sales. Market volumes and competitor data: BASF and Ciba best estimates.

344. BASF considers that combined entity will not have the ability or the incentive to foreclose access to downstream DMA3 customers by reducing its purchases of AAAs (including purchases for the supply of DMAE) from the combined entity's upstream DMAE supply competitors.
345. Ciba currently sources all of its DMAE supply needs from third parties including BASF. In 2007, Ciba purchased approx. [30-40] % ([10-50] kt) of its worldwide DMAE requirement of [10-50] kt from BASF, approx. [40-50] % ([10-50] kt) from [...] and approx. [0-5] % ([0-5] kt) from [...]. In the event that the merged entity were to internalise Ciba's worldwide DMAE demand of [10-50] kt, adding an additional [10-50] kt to Ciba's existing purchases from BASF (which accounts for just [10-20] % of total worldwide DMAE supply sales of [100-150] kt in 2007; and only [10-20] % of total worldwide AAA sales of [150-200] kt in 2007), only a small portion of DMAE worldwide market supply is added to BASF's existing customer needs.
346. In the market investigation most respondents indicated that they do not consider the transaction to have an impact on the supply of DMAE. One customer of DMAE indicated that the concentration may restrict competition for DMAE. However, this respondent concedes that post-merger there will be alternative sources for DMAE.
347. In addition to BASF and Taminco other significant suppliers will remain active in supplying DMAE. The Commission therefore considers that no foreclosure issues concerning the supply of DMAE will arise. Customer foreclosure can be excluded in view of the fact that CIBA is already an important customer of BASF for DMAE.
348. The Commission therefore concludes that the concentration does not give rise to serious doubts as to its compatibility with the common market in relation to DMAE/AAA – DMA3.

#### 4. N4-amine – HMW HALS for plastics

349. BASF produces N4-amine in Ludwigshafen. Ciba uses N4-amine to produce [...] one of its HMW HALS for plastics products.

*N4-amine (upstream product)*

350. N4-amine is used as an intermediate for the production of agricultural chemicals, paper and textile auxiliaries, emulsifiers, flotation agents, fuel and lubricant additives, detergents, mortars and polymer stabilisers. It is also used as a hardener and a crosslinking agent for epoxy resins. Amongst these various applications, N4-amine is also a raw material for the production of HMW HALS for plastics.
351. BASF considers that N4-amine constitutes a single distinct product market. The Commission considers that the relevant product and geographic market for N4-amine can be left open since the transaction will not lead to competition concerns under any potential market definition.

*HMW HALS for plastics (downstream product)*

352. The Commission has dealt with HMW HALS for plastics and the other potential markets for HALS in paragraphs 237-243 above.

*Assessment N4-amine –HMW HALS for plastics*

353. [BASF is a very strong supplier of N4-amine in the EEA [80-100] %]. The total size of the EEA market is EUR [250,000-750,000] in 2007. Worldwide there is one additional producer in China with an estimated market share of ca. [20-30] %. BASF submits that Ciba is the only customer of BASF for N4-amine which uses this product for the production of HMW HALS for plastics.
354. BASF considers that post-transaction the merged entity would have neither the ability nor the incentive to foreclose access to N4-amine for other HMW HALS for plastics producers because no other producers of HMW HALS for plastics require BASF's N4-amine for their production. N4-amine is an input product for certain HALS products. Customers for these products could easily switch to other producers of HMW HALS for plastics. Also, the concentration would not lead to customer foreclosure as there would currently be no other N4 amine producer in the EEA apart from BASF.
355. In the market investigation a HALS producer stated that it is using N4-amine from BASF for some of its HMW HALS for plastics products. Apart from this one additional producer the Commission did not identify any other HALS manufactures using N4-amine as an input. This manufacturer also produces HALS from materials other than N4-amine.
356. The Commission considers that in view of the fact that the majority of producers of HMW HALS for plastics do not use N4 amine as an input, HMW HALS for plastics customers could switch to these other producers. Therefore any potential input foreclosure would not negatively affect end-customers for HALS. Customer foreclosure is excluded as BASF is the only producer in the EEA.
357. Furthermore BASF has offered to divest Ciba's HMW HALS, Chimassorb 119 to resolve the horizontal problem in HALS. Therefore after the divestment BASF will only have merchant sales to the purchaser of the Chimassorb 119 business and the other producer. It will therefore have no incentive to foreclose as it will not use N4-amine internally to produce HMW HALS.
358. The Commission therefore concludes that the concentration does not give rise to serious doubts as to its compatibility with the common market in relation to N4-amine – HMW HALS for plastics.

## 5. Thiodiglycol-Phenolic Antioxidants

### *Thiodiglycol (upstream product)*

359. The Commission has not previously dealt with the market definition for thiodiglycol. According to the parties it is not substitutable with other products. This has been confirmed in our market investigation.
360. The relevant geographic market for thiodiglycol is, according to BASF, worldwide. However in the present case it is not necessary to reach a conclusion as the competition analysis is unchanged whether a global or an EEA market is considered.

### *Phenolic antioxidants (downstream products)*

361. The Commission has dealt with market definitions for phenolic antioxidants in paragraph [303-305] above.

### *Assessment - thiodiglycol-Phenolic antioxidants*

362. BASF's thiodiglycol is used as an input for only [0-5] % of Ciba's phenolic antioxidants production. Ciba's phenolic antioxidants containing thiodiglycol are specialty antioxidants used for wire and cable applications. Potential competitors are 2-mercaptoethanol manufacturers, which do not currently have sales of thiodiglycol. In phenolic antioxidants, Ciba is a market leader with [30-40] % market share in the EEA, [30-40] % in the world.
363. The Parties submit that thiodiglycol is a small market with total worldwide sales of 3.2 mln Euro, and can even be replaced by other products in certain applications. Moreover, Ciba is the only customer, which uses thiodiglycol for antioxidants.
364. With market shares of [90-100] % in the EEA and [70-80] % globally BASF is [a very large] supplier of thiodiglycol to the merchant market. However thiodiglycol is an unavoidable by-product of the manufacture of 2-mercaptoethanol. The Commission's market investigation confirmed that 2-mercaptoethanol producers have thiodiglycol as an unavoidable by-product and that they incinerate it because there is no or very little demand for the product. Therefore any attempt by the combined entity to raise prices or restrict supply of thiodiglycol would likely be met by sales from these producers. No customer foreclosure is possible, as the market investigation has identified several significant potential alternative and potential producers.
365. The Commission therefore concludes that the concentration does not give rise to serious doubts as to its compatibility with the common market in relation to thiodiglycol-phenolic antioxidants.

## 6. Ditridecylamine – Antiwear lubricant additives

### *Ditridecylamine (upstream product)*

366. The Commission has not previously considered the markets for ditridecylamine. However it is unlikely that the relevant product market is narrower than ditridecylamine. On the supply side most if not all producers of other alkylamines (ditridecylamine is an alkylamine) could produce ditridecylamine. In any case the

product market can be left open as the competition analysis would not change if a wider market definition were used.

367. BASF claims that the relevant geographic market is global. It is not necessary to determine whether the relevant geographic is global or the EEA as the analysis is the same in both cases.

*Antiwear lubricant additives (downstream product)*

368. Antiwear lubricant additives are chosen for function rather than chemical composition. There are many materials which can perform the functionality required. It is therefore possible to produce antiwear lubricant additives without using ditridecylamine. All major producers have a range of products based on different chemistries. Customers choose a selection of additives to meet their requirements for function and cost. It is not therefore appropriate to further subdivide the market.
369. In a previous decision<sup>72</sup> the Commission considered that the relevant geographic market for additives was at least EEA wide and probably global. For the purpose of this decision it is not necessary to decide on the relevant geographic market as the competition analysis is similar whether the market is EEA or Global.

*Assessment Ditridecylamine – Antiwear lubricant additives*

370. BASF has a [90-100] % share of the market for ditridecylamine in the EEA and [90-100] % globally. However Ciba's share of antiwear lubricant additives is less than [0-5]%. Ditridecylamine is only one of many inputs for antiwear lubricant additives. If BASF were to restrict supplies or increase prices antiwear lubricant additive manufacturers would be able to turn to alternative chemistries and negate any anti-competitive effects.
371. Furthermore Ciba's share on the downstream market is so small that such a strategy on the part of BASF would not be profitable.
372. The Commission therefore concludes that the proposed operation does not raise serious doubts in relation to ditridecylamine – antiwear lubricant additives

## **7. DEHA- Metal Deactivators**

*DEHA (upstream product)*

373. DEHA 5di-(2-ethylhexyl) amine is a versatile intermediate chemical used in several applications. It is produced by BASF. Ciba does not produce DEHA but purchases it from third parties including BASF which currently supplies about [60-70] % of its requirements.
374. The Commission understands that most producers of higher alkylamines (of which DEHA is one) use multi-purpose production facilities which are flexible enough to allow their operators change their product mix based on market demand. DEHA is therefore the narrowest market that could be considered.

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<sup>72</sup> M.1137 Exxon/Shell, 08.07.1998

375. All producers supply DEHA globally. However it is not necessary to define the relevant geographic market as the market shares are similar at both global and EEA level.

*Metal deactivators (downstream product)*

376. Metal deactivators are used primarily as additives in fuels and lubricants. They may form part of a wider market of corrosion inhibitors. It is not necessary to define the relevant product market as even on the narrowest market, i.e. metal deactivators, the operation will not raise competition concerns.

377. In a previous decision<sup>73</sup> the Commission decided that the relevant geographic market for corrosion inhibitors (of which metal deactivators are a part) was at least EEA-wide and probably world-wide. However it is not necessary to decide on the relevant geographic market as the competition analysis is the same whether the global or EEA markets are concerned.

*Assessment DEHA – Metal deactivators.*

378. BASF has [60-70] % of EEA supply of DEHA ([50-60] % globally). However it is already a major supplier to Ciba. There is currently sufficient spare capacity to ensure supplies to competitors if BASF were to provide all of Ciba's requirements instead only the [60-70] % it does currently. Input foreclosure would not succeed.

379. Furthermore Ciba is only a minor player in the downstream market with shares of [5-10] % and [5-10] % in the EEA and global market respectively. It is not therefore a major buyer of inputs for metal deactivators. No customer foreclosure is likely to arise.

380. The Commission therefore concludes that the proposed operation will not give rise to serious doubts as to its compatibility with the common market in relation to DEHA – Metal deactivators

## **8. Quinacridone - Automotive Coatings**

*Quinacridone (upstream product)*

381. Quinacridone is a class of organic pigments varying from beige to violet. It is characterised by high weatherfastness, high heat stability and good migration resistance. Ciba's organic pigment – quinacridone is an input for BASF's automotive OEM and refinish coatings<sup>74</sup>. In BASF's view, quinacridone should be considered as the relevant product market.

382. The Commission has dealt with the market for quinacridone in paragraphs 101-104 and 113-117 above arriving at the conclusion that it should be considered as a separate product market from other classes of pigments. As well, an alternative market definition by application has been taken into consideration in paragraphs 105-106. In that regard, the market definition per application was left open. In the same line, the geographic market definition was left open and could be the EEA or worldwide.

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<sup>73</sup> COMP/M.1137 – Exxon/Shell.

<sup>74</sup> See case No. COMP/M.1182 – Akzo Nobel/Courtaulds, case No. COMP/M.1363 – DuPont/Hoechst/Herberts, para 7-13, 15; COMP/M.4102 – BASF/Engelhard, para 31.

*Automotive coatings (downstream product)*

383. The Commission has examined automotive coatings in a number of decisions<sup>75</sup>. In that regard, within automotive coating applications, a first distinction can be drawn between OEM coatings and refinish coatings<sup>76</sup>. Moreover, a further sub-division could be delineated in the market for OEM coating<sup>77</sup>: OEMs to coat vehicle bodies, including separated markets for (i) electrocoat, (ii) primersurfacer, (iii) basecoat and (iii) clearcoat, and OEMs coatings for plastic components.
384. According to previous decisions<sup>78</sup>, the geographic scope of the market for automotive coatings was, at least, EEA. In line with these previous decisions, BASF submits that the above mentioned geographic and product market definitions should be considered, although ultimately left the market definition open, since no concerns arise from the transaction.
385. Along the same line, the market investigation verified that a further sub-segmentation of the automotive coatings market should be considered and that the market should be considered as to be, at least, EEA-wide. In any case, as no competition concerns would arise under any alternative geographic and product market definition, the market definition can be left open.

*Assessment Quinacridone –Automotive coatings*

386. Both upstream and downstream market shares globally and at EEA level are not significantly above the [30-40] %. Ciba is present upstream with market shares of [30-40] % in the EEA and [30-40] % worldwide. In turn, BASF is active in the downstream market for automotive OEM coatings with a market share of [20-30] % on an EEA level and [30-40] % worldwide. If a further sub-segmentation by application were to be considered in the downstream market, the BASF's market shares would not exceed, under any alternative market definition, [30-40] % of the market (basecoat: EEA [30-40] %, worldwide [20-30] %; coatings for plastic components: EEA [20-30] %, worldwide [10-20] %; and automotive refinish coatings: [10-20]% EEA, [10-20] % worldwide).
387. BASF puts forward that quinacridone is not a critical input and that there is spare capacity in the market. Furthermore, BASF's demand would be substantially less than Ciba's output. As well, BASF argues that customer foreclosure would be excluded due to the fact that there are several significant coating players active in this market, such as PPG, DuPont (both with market shares above [20-30] % in any market segment) and Akzo ([5-30] % depending on the market segment).

The market investigation has identified a number of Far eastern producers who have entered the European market within the last years. In addition, one European pigment producer has announced that it will soon enter the market for quinacridone.

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<sup>75</sup> Commission decision of 30/06/1998, COMP/M.1182 – *Akzo Nobel/Courtaulds*; Commission decision of 05/02/1999, COMP/M.1363 – *DuPont/Hoechst/Herberts*; Commission decision of 23/02/2006, COMP/M.4102 – *BASF/Engelhard*; Commission decision of 10/12/2007, COMP/M.4853 – *PPG/SigmaKalon*.

<sup>76</sup> Commission decision of 10/12/2007, COMP/M.4853 – *PPG/SigmaKalon*.

<sup>77</sup> DuPont/Hoechst/Herberts and BASF/Engelhard decisions (see above)

<sup>78</sup> See above

Furthermore, none of the respondents raised any serious concern in the market investigation concerning this vertical relationship.

388. The Commission considers that, in view of the above mentioned facts and the moderate Parties' market shares both in the upstream and in the downstream market, the concentration will not give rise to foreclosure issues in relation to quinacridone and automotive coating market.
389. The commission therefore concludes that the proposed operation does not raise serious doubts as to its compatibility with the common market in relation to Quinacridone – Automotive coatings

## **9. Morpholine - Optical brighteners**

390. The transaction will lead to a vertical integration between BASF's production of morpholine and Ciba's activities in optical brighteners ("OBA"), namely in stilbene-based OBA.

### *Morpholine (upstream product)*

391. Morpholine is a chemical belonging to the group of amines. One of the applications of morpholine is as an intermediate for optical brighteners.
392. BASF produces morpholine in its plants in [...] and in [...]). Ciba does not produce morpholine. In morpholine, BASF holds a market share of [50-60] % in the EEA and [20-30] % worldwide. Competitors are Huntsman (EEA: [30-40] %, world: [20-30] %) and several Asian producers with global market shares between [10-20] % and [5-10] % (however negligible or no presence in the EEA).
393. The Parties submit that the exact product market definition for morpholine can be left open, since even on a narrow market for morpholine no competition concerns arise. In the past the Commission considered the relevant product market for morpholine<sup>79</sup> and left the relevant product market definition open. The Commission considers that in this case, the precise product market definition for morpholine can be equally left open since the transaction will not lead to competition concerns in relation to morpholine.
394. The Parties submit that the relevant geographic market for morpholine is worldwide. In the past the Commission has left the definition of the relevant geographic market for morpholine open<sup>80</sup>. The market investigation showed that a world-wide market for morpholine cannot be excluded. However, the definition of the relevant geographic market for morpholine can be left open, since, regardless of the precise market definition, the transaction will not give rise to competition concerns.

### *Optical Brighteners (downstream product)*

395. Optical brighteners, also known as optical brightening agents (OBA) are additives that enhance the white appearance of fabrics and paper. They are water-soluble organic compounds with a high affinity for cellulosic material. The main types of optical brighteners are stilbene-based OBA and Dinatrium-4,4-bis-(2-sulfostyryl)-biphenyl

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<sup>79</sup> Case No. COMP/M.4179 – Huntsman/Ciba TE Business, para. 23.

<sup>80</sup> Case No. COMP/M.4179 – Huntsman/Ciba, para. 17.

(DSBP)-based OBA. Stilbene-based OBA are used for detergent, textile and paper applications. DSBP-based OBA are mainly used for detergent and textile applications.

396. Ciba produces stilbene-based OBA for detergents and paper, and DSBP-based OBA for detergents. It does not market optical brighteners for textiles since it sold its textile effects business to Huntsman in 2006. Ciba makes optical brighteners in [...]. Ciba's market share in stilbene-based OBA is [...] both in the EEA and worldwide. The Parties submit that morpholine is an input for stilbene-based OBA only and the majority of stilbene-based OBA are made without morpholine.
397. In BASF's view, stilbene-based OBA and DSBP-based OBA form distinct product markets and there is no distinction within stilbene-based OBA. The Commission considered the relevant product market for OBA previously<sup>81</sup> and left the definition of the relevant product market open. The market investigation in this case confirmed that there is a distinction between stilbene-based OBA and DSBP-based OBA. Therefore the Commission considers that there is a separate relevant product market for stilbene based OBA.
398. BASF submits that the geographical market for stilbene-based OBA is global. These products are traded globally, transport costs do not exceed 5-10% of the sales price, and imports into the EEA are not subject to any tariffs.
399. Previously, the Commission has left the definition of the relevant geographic market for optical brighteners open<sup>82</sup>. The market investigation results point toward a world-wide market scope for optical brighteners. However, for the purposes of the present case, the product market definition can be left open as the competitive assessment does not change regardless of the product market definition.

#### *Assessment Morpholine - Optical Brighteners*

400. In BASF's view, foreclosure issues are excluded due to excess capacity in the market, insignificant cost of morpholine relative to the price of the downstream product and the fact that the majority of stilbene-based OBA do not use morpholine as an input. Further, Ciba's demand for morpholine represents only [0-5] % of the merchant market for morpholine.
401. Respondents to the Commission's market investigation indicated that there are other products, which can be used to make optical brighteners, in particular DIPA, ethanolamine, diisopropanolamine and aniline. Alternative suppliers of morpholine, which only accounts for a small part of the cost of the optical brighteners in which it is used ([0-5] %) have indicated that they can increase output. Finally, some respondents who currently resell morpholine on the merchant market indicated that they would be able to start producing the product.
402. The Commission therefore concludes that the concentration will not raise serious doubts as to its compatibility with the common market in relation to morpholine and optical brighteners.

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<sup>81</sup> Case No. COMP/M.4179 – Huntsman/Ciba TE Business, para. 37.

<sup>82</sup> Case No. COMP/M.4179 – Huntsman/Ciba TE Business, para. 44.



## 10. Trimethylamine ("TMA") – Fixatives

403. The Transaction will lead to a vertical integration between BASF and Ciba with regard to the production of trimethylamine (TMA) and fixatives. BASF produces TMA which is an input of cationic modified starches used as fixatives, manufactured by Ciba. Ciba does not manufacture TMA. BASF is also a fixatives supplier. However, it is not active in the market segment of starch-based fixatives.

### *Trimethylamine (upstream product)*

404. TMA belongs to the chemical family of methylamines, which are used in a variety of products, including gas treatment, water treatment, solvents, coatings and animal nutrition. The two other types of methylamines are monomethylamine (also commonly referred to as methylamine) and dimethylamine (DMA). The reaction of methanol and ammonia always produces all three methylamines, which are then separated by distillation. The largest use of TMA is choline chloride which is an animal feed additive. Other uses include electronics, esterquats / surfactants, biocides and agrochemicals. According to BASF, only small amounts of TMA are used for the production of cationic starches used as fixatives and it is not utilised for any other fixative chemical.

405. BASF produces about [...] of methylamines at its production site in Ludwigshafen (Germany), the main output product being DMA. It is backward integrated into methanol and ammonia, however, additional quantities are purchased on the merchant market. BASF uses most of its TMA captively.

406. Ciba utilises TMA for the production of cationic starch, starch-based semisynthetic dry strength agents and starch-based fixatives. It manufactures starch-based fixatives in Kaipiainen (Finland) and sells them under the trade name Raifix®. Ciba sources about [20-30] % of its EEA TMA demand from BASF, [70-80] % is purchased from Taminco.

407. BASF considers TMA to be part of a wider distinct methylamines product market. However, BASF submits that the question of market definition can be left open, as even on the basis of the narrowest market definition, i.e. that TMA forms one separate product market, no competition concerns would arise, since the Transaction will have no foreclosure or any other anticompetitive effects. BASF argues that the relevant geographic market for TMA is EEA-wide since it is a low boiling flammable product and therefore hazardous and costly to transport.

408. The Commission has described the market for methylamines in paragraph 320.

### *Fixatives (downstream product)*

409. Fixatives are paper chemicals that are added to the paper furnish to remove interfering substances by fixing them to cellulose fibres or fillers with the help of cationic polymers or inorganic chemicals.

410. BASF submits that fixatives constitute a single relevant product market. They also submit that the relevant geographic market for fixatives is limited to the EEA. The Commission has described the market for fixatives in paragraphs 64-65.

### *Assessment Trimethylamine ("TMA") – Fixatives*

411. No foreclosure concerns arise on the TMA and fixatives markets as a result of the transaction. According to the Parties, the EEA merchant market for TMA is small with a total size of only €11.5 million since producers often make captive use of this product. Taminco is by far the largest EEA player (see **Table 1** below). BASF has a similar share of the wider market for all methylamines, [30-40] % at EEA level.

**Table 1: TMA (2007 figures)**

<b>Suppliers</b>	<b>WW sales (€ million)</b>	<b>WW market share (%)</b>	<b>EEA sales (€ million)</b>	<b>EEA market share (%)</b>
<b>BASF</b>	[...]	<b>[5-10]</b>	[...]	<b>[20-30]</b>
Taminco	[...]	[20-30]	[...]	[50-60]
Ertisa	[...]	[0-5]	[...]	[10-20]
Balchem	[...]	[0-5]	[...]	[0-5]
DuPont	[...]	[10-20]	[...]	[0-5]
Various Chinese suppliers	[...]	[30-40]	[...]	[0-5]
Others	[...]	[10-20]	[...]	[0-5]
<b>Total</b>	<b>65</b>	<b>100</b>	<b>11.5</b>	<b>100</b>

(Figures may not add up due to rounding)

Source: BASF and Ciba actual sales. Market volumes and competitor data: BASF and Ciba best estimates

412. Both Parties are active on the market for fixatives. BASF holds a market share of [10-20] %, Ciba [10-20] %. The combined entity's main EEA competitors are Kemira and Nalco. Sales and market share figures are illustrated in **Table 2**.

<b>Fixatives (2007 figures)</b>				
<b>Suppliers</b>	<b>WW sales (€ million)</b>	<b>WW market share (%)</b>	<b>EEA sales (€ million)</b>	<b>EEA market share (%)</b>
BASF	[...]	[5-10]	[...]	[10-20]
Ciba	[...]	[5-10]	[...]	[10-20]
<b>Combined</b>	<b>[...]</b>	<b>[10-20]</b>	<b>[...]</b>	<b>[20-30]</b>
Nalco	[...]	[10-20]	[...]	[10-20]
Ashland Hercules /	[...]	[10-20]	[...]	[5-10]
Kemira	[...]	[10-20]	[...]	[10-20]
Eka	[...]	[0-5]	[...]	[0-5]
Sachtleben	[...]	[0-5]	[...]	[5-10]

Buckman	[...]	[5-10]	[...]	[0-5]
Montedison	[...]	[0-5]	[...]	[0-5]
Others	[...]	[30-40]	[...]	[20-30]
Total	318	100	80	100
(Figures may not add up due to rounding)				

*Source: BASF and Ciba actual sales. Market volumes and competitors shares: BASF and Ciba best estimates.*

413. In BASF's view, the merged entity will neither have the ability nor the incentive to raise downstream fixatives producers' costs by restricting or foreclosing access to TMA.
414. The merged entity will not have a significant degree of market power in the TMA market. As can be seen from **Table 1**, BASF's EEA market share is moderate ([20-30] %). Strong suppliers such as Taminco ([50-60] %) and Ertisa ([10-20] %) are willing and able to supply downstream producers with TMA.
415. According to BASF, in relation to the overall market for fixatives TMA is a negligible input product. With the exception of cationic modified starches no fixative contains TMA. Starch-based fixatives account for less than [5-10]% of the fixatives market. Ciba uses TMA for only [0-5]% of its total fixatives sales. None of the other larger downstream producers uses TMA for their fixatives products.
416. It is unlikely that the combined entity would have either the ability or the incentive to foreclose access to the downstream fixatives market by reducing its purchases of TMA from BASF's upstream TMA competitors. With an EEA share of [20-30] % (see **Table 2**) the merged entity will not have a significant degree of market power downstream. In addition, there is a broad customer base for TMA since it has a variety of uses such as choline chloride, electronics, esterquats / surfactants, biocides and agrochemicals. The main customers are [...]. Taminco would therefore have no difficulties to sell its TMA to one or several of these customers if the merged entity reduced its purchases.
417. The Commission therefore concludes that the concentration will not raise serious doubts as to its compatibility with the common market in relation to TMA and fixatives.

## VI. CONDITIONS AND OBLIGATIONS

418. The Commitments under Section B and the corresponding Schedules of the attached Commitment text constitute conditions of this decision, as only through full compliance therewith (subject to any change pursuant to the review clause), can the structural change on the relevant markets be achieved. The remaining commitments constitute obligations, as they concern the implementing steps which are necessary to achieve the sought structural change.

## **VII. CONCLUSION**

419. The Commission has concluded that the remedies submitted by the Notifying Party are sufficient to remove the serious doubts as to its compatibility with the common market raised by the concentration. Subject to the full compliance with the conditions of the Commitments submitted by the Notifying Party and with the obligations thereto, the Commission has decided not to oppose the notified operation and to declare it compatible with the common market and with the EEA Agreement. This decision is adopted in application of Article 6(1)(b) and Article 6(2) of Council Regulation (EC) No 139/2004.

420. The detailed text of the commitments is annexed to this decision. The full text of the annexed commitments forms an integral part to this decision.

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

**By e-mail and by hand**

European Commission – Merger Task Force  
DG Competition  
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**Case M.5355 – BASF/ CIBA**

**COMMITMENTS TO THE EUROPEAN COMMISSION**

Pursuant to Article 6(2) of Council Regulation (EC) No 139/2004 (the “*Merger Regulation*”), BASF SE (“*BASF*”) hereby provides the following Commitments (the “*Commitments*”) in order to enable the European Commission (the “*Commission*”) to declare the acquisition of sole control over Ciba Holding AG, the ultimate parent company of the Ciba (formerly Ciba Specialty Chemicals) Group (“*Ciba*”) by BASF (the “*Transaction*”) compatible with the common market and the EEA Agreement by its decision pursuant to Article 6(1)(b) of the Merger Regulation (the “*Decision*”).

BASF reserves full discretion to withdraw the Commitments if the Commission takes a decision pursuant to Article 6(1)(c) of the Merger Regulation.

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

This text shall be interpreted in the light of the Decision to the extent that the Commitments are attached as conditions and obligations, in the general framework of Community law, in particular in the light of the Merger Regulation, and by reference to the Commission Notice on remedies acceptable under Council Regulation (EEC) No 4064/89 and under Commission Regulation (EC) No 447/98.

**Section A. Definitions**

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

**Affiliated Undertakings:** undertakings controlled by the Parties and/or by the ultimate parents of the Parties, whereby the notion of control shall be interpreted pursuant to Article 3 Merger Regulation and in the light of the Commission Notice on the concept of concentration under Council Regulation (EEC) No 4064/89.

**Closing:** the transfer of the legal title of the Divestment Business to the purchaser. The term ‘Closing’ in Section B paragraph 4 (a) to (g) shall be construed to exclusively refer to, in the relevant context, the transfer of the legal title of the respective Divestment Businesses described in Section B paragraph 4 (a) to (g).

**Consummation Date:** the date on which BASF shall acquire title to the shares in Ciba based on the public tender offer published on 1 October 2008.

**Commitment DMA3:** the commitment to divest the BASF business relating to manufacture and sale of dimethylaminoethyl acrylate as defined in Section B and Schedule A (*Divestment business DMA3*).

**Commitment SDA:** the commitment to divest the Ciba business relating to the manufacture and sale of synthetic dry strength agents defined in Section B and Schedule B (*Divestment business SDA*).

**Commitment BV:** the commitment to divest the Ciba business relating to the manufacture and sale of bismuth vanadate pigments as defined in Section B and Schedule C (*Divestment business BV*).

**Commitment IB:** the commitment to divest the Ciba business relating to the manufacture and sale of indanthrone blue pigments as defined in Section B and Schedule D (*Divestment business IB*).

**Commitment SA:** the commitment to divest the Ciba business relating to the manufacture and sale of styrene acrylic latex polymers as defined in Section B and Schedule F (*Divestment business SA*).

**Commitment HALS:** the commitment to divest part of the Ciba business relating to the manufacture and sale of hindered amine light stabilisers as defined in Section B and Schedule G (*Divestment business HALS*).

**Commitment UV Filter:** the commitment to grant a licence for the Ciba product Tinosorb S (*UV Filter Licence Agreement*) and to fulfil any other obligation as defined in Section B and Schedule H relating to the manufacture and sale of UV Filter (*Substantive Obligation UV Filter*).

**Divestment Business or Divestment Businesses:** the business or businesses as defined in Section B and the Schedules A to H. The singular term 'Divestment Business' shall be deemed to include, as the case may be, all below-defined Divestment Businesses. The terms 'Divestment Business' or 'Divestment Businesses' shall also be construed, *mutatis mutandis*, to include the Substantive Obligation UV Filter as defined below.

**Divestiture Trustee:** one or more natural or legal person(s), independent from the Parties, who is (are) approved by the Commission and appointed by BASF and who has (have) received from BASF the exclusive Trustee Mandate to sell the Divestment Business to a purchaser at no minimum price.

**Effective Date:** the date of adoption of the Decision.

**First Divestiture Period:** the period of [...] months from the Effective Date.

**Hold Separate Manager:** the person(s) appointed by BASF for the Divestment Businesses to manage the day-to-day business under the supervision of the Monitoring Trustee.

**Key Personnel:** all personnel necessary to maintain the viability and competitiveness of the Divestment Businesses, as listed in the Schedules.

**Licencee:** the licensee of the UV Filter Licence Agreement.

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

**Personnel:** all personnel currently employed by the Divestment Businesses, including Key Personnel, staff seconded to the Divestment Businesses, shared personnel and the additional personnel listed in the Schedule.

**P&ID:** Process & Instrumentation Diagrams.

**Purchaser:** the respective entity approved by the Commission as acquirer of one or more of the Divestment Businesses in accordance with the criteria set out in Section D. The term 'Purchaser' in Section B paragraph 4 (a) to (g) shall be construed to exclusively refer to, in the relevant context, the purchaser of the respective Divestment Businesses described in Section B paragraph 4 (a) to (g).

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

**Trustee Divestiture Period:** the period of [...] months from the end of the First Divestiture Period.



## **Section B. The Divestment Businesses**

### Commitment to divest the Divestment Businesses and to fulfil the Substantive Obligation UV Filter

1. In order to restore effective competition,
  - (a) BASF commits to enter into, or cause Ciba to enter into, a final binding sales and purchase agreement with the Purchaser for the Divestment Business HALS prior to the Consummation date, and to transfer the legal title of the Divestment Business HALS to the Purchaser within a period not exceeding [...] months after the conclusion of the sales and purchase agreement.
  - (b) BASF commits to divest, or procure the divestiture of the other Divestment Businesses by the end of the Trustee Divestiture Period as a going concern to one or several purchasers and on terms of sale approved by the Commission in accordance with the procedure described in paragraph 14. To carry out the divestiture, BASF commits to find one or several purchasers and to enter into, or to cause Ciba to enter into, final binding sale and purchase agreements for the sale of the Divestment Businesses within the First Divestiture Period. If BASF has not entered into such agreements at the end of the First Divestiture Period, BASF shall grant the Divestiture Trustee an exclusive mandate to sell the Divestment Businesses in accordance with the procedure described in paragraph 23 in the Trustee Divestiture Period.
  - (c) In respect of the Commitment UV Filter, BASF commits to fulfil, or cause Ciba to fulfil, the Substantive Obligation UV Filter.
2. BASF shall be deemed to have complied with the Commitments if, by the end of the Trustee Divestiture Period, BASF or Ciba – as the case may be – have entered into final binding sale and purchase agreements, and final binding licence agreement, if the Commission approves the purchaser(s) or the licensee(s) and the terms in accordance with the procedure described in paragraph 14 and if the Closing, and the entry into force of the UV Filter Licence Agreement, takes place within a period not exceeding [...] months after the approval of the purchaser or the Licensee and the terms of sale by the Commission.
3. In order to maintain the structural effect of the Commitments, the Parties shall, for a period of 10 years after the Effective Date, not acquire direct or indirect influence over the whole or part of the Divestment Businesses, unless the Commission has previously found that the structure of the market has changed to such an extent that the absence of influence over one or several of the Divestment Businesses is no longer necessary to render the proposed concentration compatible with the common market.

### Structure and definition of the Divestment Businesses and the Substantive Obligation UV Filter

4. The Commitments contained herein relate to the above defined Divestment Businesses and Substantive Obligation UV Filter.
  - (a) The Divestment Business DMA3 consists of BASF's entire DMA3 business. The present legal and functional structure of the Divestment Business as operated to date is described in Schedule A. It includes

- i. all tangible and intangible assets (including intellectual property rights), which contribute to the current operation or are necessary to ensure the viability and competitiveness of the Divestment Business DMA3, in particular the BASF DMA3 production unit with a capacity of [...]kt/year, [...] DMA3 product tanks and a nearby DMA3 loading station (***DMA3 Production Assets***). All these facilities are located at the BASF [...] site in [...]. The Divestment Business DMA3 further includes inventories, operation manuals (including relevant P&ID), and non-exclusive licenses of patents related to the production of DMA3.
  - ii. all licences, permits and authorisations issued by any governmental organisation for the benefit of the Divestment Business DMA3;
  - iii. all contracts, leases, commitments and customer orders of the Divestment Business DMA3; all customer, credit and other records of the Divestment Business (items referred to under (i)-(iii) hereinafter collectively referred to as "***DMA3 Assets***");
  - iv. at the request of the Purchaser, Personnel for technical supervision, sales and marketing;
  - v. a long-term agreement pursuant to which BASF will operate on behalf of the Purchaser the DMA3 Production Assets for the Purchaser in accordance with standard industry terms;
  - vi. a long-term agreement pursuant to which the Purchaser will lease the building which houses the DMA3 Production Assets; and
  - vii. agreements for the supply of raw materials for the production of DMA3 and other supporting agreements (recycling of by-products, waste treatment, other).
- (b) The Divestment Business SDA consists of Ciba's entire EEA SDA business. The present legal and functional structure of the Divestment Business as operated to date is described in Schedule B. It includes
- i. all tangible and intangible assets (including intellectual property rights), which contribute to the current operation or are necessary to ensure the viability and competitiveness of the Divestment Business, in particular the dedicated semi-synthetic dry strength production line with a capacity of [...]kt/year, currently used for the product [...]<sup>1</sup>, production vessels, inventory and production storage facilities. All these assets are located at the Ciba site in [...]. The Divestment Business SDA further includes operation manuals, relevant P&ID, other production know-how including training of and assistance to key personnel during an interim period and a license of a patent related to the production of SDA;

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<sup>1</sup> This product will need to be rebranded

- ii. the benefit of all licences, permits and authorisations issued by any governmental organisation with regard to the Divestment Business SDA, including the benefits of a license to store and handle chemicals and an environmental license valid for the Divestment Business SDA;
  - iii. all contracts, leases, commitments and customer orders of the Divestment Business SDA; all customer, credit and other records of the Divestment Business SDA (items referred to under (i)-(iii) hereinafter collectively referred to as “*SDA Assets*”);
  - iv. marketing personnel;
  - v. a toll-manufacturing agreement with the Purchaser for the production of the synthetic dry strength products [...]<sup>2</sup>at [...];
  - vi. a toll-manufacturing agreement with the Purchaser for the synthetic dry strength product [...] produced at [...], together with the respective trademark;
  - vii. the transfer of the existing toll-manufacturing agreement with [...] for the synthetic dry strength products [...]; and
  - viii. the benefit of all current supporting arrangements under which Ciba or Affiliated Undertakings supply products or services to the Divestment Business, as detailed in Schedule B, in particular relating to energy supply, plant maintenance, waste water treatment and solid waste disposal.
- (c) The Divestment Business BV consists of Ciba’s entire bismuth vanadate business. The present legal and functional structure of the Divestment Business as operated to date is described in Schedule C. It includes
- i. all tangible and intangible assets (including intellectual property rights), which contribute to the current operation or are necessary to ensure the viability and competitiveness of the Divestment Business BV, in particular, at the request of the Purchaser, the bismuth vanadate synthesis ([...]), encapsulation and finishing lines ([...]), inventories and auxiliary equipment for waste water pre-treatment. All these assets are located at the Ciba site in [...]. The Divestment Business BV further includes Ciba’s entire directly bismuth vanadate-related patents and production know-how, in particular operation manuals (including P&ID), raw material and end product specifications and other know-how including training of and assistance to key personnel during an interim period and licenses of patents related to the production of bismuth vanadate<sup>3</sup>;

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<sup>2</sup> These products will need to be rebranded.

<sup>3</sup> These licences pertain to patents relevant for other products the production of which is not part of the Commitments. These licenses will therefore be granted non-exclusively.

- ii. all licences, permits and authorisations issued by any governmental organisation for the benefit of the Divestment Business BV, including, *inter alia*, the benefits of an environmental permit issued by [...] and waste water, discharge and ground water withdrawal permits issued by water authorities;
  - iii. all contracts, leases, commitments and customer orders of the Divestment Business BV; all customer, credit and other records of the Divestment Business BV (items referred to under (i)-(iii) hereinafter collectively referred to as “**BV Assets**”);
  - iv. the Personnel, including production unit head, production engineer, foreman and shift managers as well as operators of production and finishing lines;
  - v. the benefit of all current supporting arrangements under which Ciba or Affiliated Undertakings supply products or services to the Divestment Business BV as detailed in Schedule C, in particular relating to energy supply, plant maintenance, waste water treatment and solid waste disposal.
- (d) The Divestment Business IB consists of Ciba’s entire indanthrone blue business. The present legal and functional structure of the Divestment Business as operated to date is described in Schedule D. It includes
- i. all intangible assets (including intellectual property rights), which contribute to the current operation or are necessary to ensure the viability and competitiveness of the Divestment Business IB, in particular Ciba’s entire indanthrone blue-related production know-how, including special finishing know-how.<sup>4</sup> The Divestment Business IB further includes inventories, operation manuals, equipment specifications, flow sheets, process and instrumentation diagrams, risk analysis, raw material specifications, certificates of analysis and training of and assistance to key personnel during an interim period;
  - ii. [...];
  - iii. all contracts, leases, commitments and customer orders of the Divestment Business IB; all customer, credit and other records of the Divestment Business IB (items referred to under (i)-(iii) hereinafter collectively referred to as “**IB Assets**”); and
  - iv. the benefit of a toll-manufacturing agreement with the Purchaser for indanthrone blue during a transitional period of up to [...];
- (e) The Divestment Business SA consists of Ciba’s entire styrene acrylate (**SA**) business as well as its entire polyvinyl acetate (**PVAc**) and all-acrylics (**AA**)

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<sup>4</sup> As tangible assets, the Divestment Business IB will include inventories

businesses. The present legal and functional structure of the Divestment Business as operated to date is described in Schedule F. It includes

- i. all tangible and intangible assets (including intellectual property rights), which contribute to the current operation or are necessary to ensure the viability and competitiveness of the Divestment Business SA, in particular the dedicated building containing the synthetic latex polymer production units for SA, AA and PVAc consisting of [...] production lines with full scale reactors, [...] pilot reactors, [...] batch stripper<sup>5</sup> and storage tanks for both key raw materials and finished product (the **SA Production Assets**). All these assets are located at the Ciba site in [...] and contained in a designated and physically separable part of Ciba's [...] facility. The Divestment Business SA also includes, at the request of the Purchaser, the transfer to the Purchaser of the trademark "[...]";
  - ii. the benefit of all licences, permits and authorisations issued by any governmental organisation for the benefit of the Divestment Business SA, including the benefits of a license to store and handle chemicals and an environmental license valid for the Divestment Business SA, to the extent legally transferable;
  - iii. all contracts, leases, commitments and customer orders of the Divestment Business SA; all customer, credit and other records of the Divestment Business SA (items referred to under (i)-(iii) hereinafter collectively referred to as "**SA Assets**");
  - iv. certain Personnel, in particular plant management, production supervision, plant operators and shift staff as well as R&D, sales and marketing personnel;
  - v. the transfer of certain existing supply agreements for raw materials;
  - vi. the transfer of an existing toll-manufacturing agreement pursuant to which the Divestment Business SA will produce [...] for [...];
  - vii. the benefit of all current supporting arrangements under which Ciba or Affiliated Undertakings supply products or services to the Divestment Business SA, as detailed in Schedule F, in particular relating to storage, energy supply, plant maintenance, waste water treatment and solid waste disposal; and
  - viii. the offer to enter into a toll-manufacturing for the Parties of certain additional products made on the SA Production Assets and an agreement pursuant to which the Divestment Business SA will supply methyl methacrylate to the Parties.
- (f) the Divestment Business HALS consists of Ciba's entire business relating to the manufacture and marketing of its high molecular weight HALS product

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<sup>5</sup> A batch stripper is a unit that separates odorous volatile organic substances from the product.

Chimassorb 119 FL. The present legal and functional structure of the Divestment Business as operated to date is described in Schedule G. It includes

- i. all tangible and intangible assets (including intellectual property rights), which contribute to the current operation or are necessary to ensure the viability and competitiveness of the Divestment Business HALS, in particular the Ciba Chimassorb 119 FL production unit with a capacity of [...]kt/year consisting of, *inter alia*, reactors, buffers, filters and granulators (***Chimassorb Production Assets***). All these facilities are located at the Ciba site at [...] ([...], the ***Chimassorb site***). At the request and cost of the Purchaser, the Chimassorb Production Assets can be moved away from the Chimassorb site to another site. The Divestment Business HALS further includes know-how consisting of the process description and operating procedure for Chimassorb 119;
  - ii. a exclusive non-transferrable, perpetual worldwide licence to the Chimassorb 119 FL brand name for a interim period following Closing;
  - iii. all contracts, leases, commitments and customer orders of the Divestment Business; all customer, credit and other records of the Divestment Business (items referred to under (i)-(iii) hereinafter collectively referred to as the “***Chimassorb Assets***”);
  - iv. [...];
  - v. [...]; and
  - vi. [...].
- (g) The Commitment UV Filter relates to the UV Filter Licence Agreement as well as the Substantive Obligation UV Filter. The scope of the UV Filter Commitment is described in Schedule H. It includes
- i. the UV Filter Licence Agreement; under the UV Filter Licence Agreement, the Licensee will be granted
    - a sole fully paid-up, perpetual royalty-free worldwide licence without the right to grant sublicences to the patent EP 0 775 698 B and its foreign counterparts, protecting bis-resorcinyl-triazine and relating to the production of Ciba’s Tinosorb S, for the manufacture and sale of a UV Filter product equivalent to Ciba’s Tinosorb S (the ***licensed UV Filter***);
    - a sole fully paid-up, perpetual royalty-free worldwide licence without the right to grant sublicences to the patent EP 1 280 505 B and its foreign counterparts, protecting photostable compositions comprising bis-resorcinyl-triazine in combination with a dibenzoylmethane UV absorber, for the manufacture and sale of the licensed UV Filter;

- full access to Ciba’s production know-how and technical product information for the manufacture and sale of the licensed UV Filter. This includes production process information, operation manuals (including P&ID diagrams), flow sheets, risk analysis, raw materials specifications, certificates of analysis and end product specifications. The Licensee will furthermore, to the extent legally feasible, benefit from existing, necessary authorisations for Tinosorb S granted by the competent administrative authorities; and
  - a non-assert commitment according to which BASF will not assert its own and Ciba’s intellectual property rights existing at the date of the UV Filter Licence Agreement against the Licensee and the customers of the Licensee for use of the licensed UV Filter with any other UV Filter.
- ii. the Substantive Obligation UV Filter; under the Substantive Obligation UV Filter, the Licensee will, at its request, be provided with
- technical assistance and access to the relevant Ciba engineering teams, as well as technical training reasonably necessary to enable the Licensee to manufacture the licensed UV Filter and [...];
  - Tinosorb S, or, at the request of the Licensee, the [...] during a transitional period of up to [...] on standard terms and conditions, with an option to extend the period by [...] to a total of [...].

## **Section C. Related commitments**

### Preservation of Viability, Marketability and Competitiveness

5. From the Effective Date until Closing, BASF shall preserve the economic viability, marketability and competitiveness of the Divestment Businesses, in accordance with good business practice, and shall minimise as far as possible any risk of loss of competitive potential of the Divestment Businesses. In particular BASF undertakes:
- (a) not to carry out any act upon its own authority that might have a significant adverse impact on the value, management or competitiveness of any of the Divestment Businesses or that might alter the nature and scope of activity, or the industrial or commercial strategy or the investment policy of any of the Divestment Businesses.
  - (b) to make available sufficient resources for the development of the Divestment Businesses, on the basis and continuation of the existing business plans
  - (c) to take all reasonable steps, including appropriate incentive schemes (based on industry practice), to encourage all Key Personnel to remain with the Divestment Businesses.

### Hold-separate obligations of Parties

6. BASF commits, from the Effective Date until Closing, to keep the Divestment Businesses separate from the businesses it is retaining and to ensure that Key Personnel of the Divestment Businesses – including the Hold Separate Manager(s) – have no involvement in any business retained and vice versa. BASF shall also ensure that the Personnel do not report to any individual outside the Divestment Businesses.
7. Until Closing, BASF shall assist the Monitoring Trustee in ensuring that the Divestment Businesses are managed as a distinct and saleable entity separate from the businesses retained by the Parties. BASF shall appoint one or several Hold Separate Managers who shall be responsible for the management of the Divestment Businesses, under the supervision of the Monitoring Trustee. The Hold Separate Managers shall manage the Divestment Businesses independently and in the best interest of the business with a view to ensuring their continued economic viability, marketability and competitiveness and its independence from the businesses retained by the Parties.

### Ring-fencing

8. BASF shall implement all necessary measures to ensure that it does not after the Effective Date obtain any business secrets, know-how, commercial information, or any other information of a confidential or proprietary nature relating to the Divestment Businesses (*ring-fencing*). For the avoidance of doubt, BASF commits to ring-fence, or to cause Ciba to ring-fence, the Divestment Business HALS after the Effective date before the Closing. In particular, the participation of the Divestment Businesses in a central information technology network shall be severed to the extent possible, without compromising the viability of the Divestment Businesses. BASF may obtain information relating to the Divestment Businesses which is reasonably necessary for the divestiture of the Divestment Businesses or whose disclosure to BASF is required by law.

### Non-solicitation clause

9. The Parties undertake, subject to customary limitations (e.g. responses to general job advertisements), not to solicit, and to procure that Affiliated Undertakings do not solicit, the Key Personnel transferred with the Divestment Businesses for a period of 12 months after Closing.

### Due Diligence

10. In order to enable potential purchasers to carry out a reasonable due diligence of the Divestment Businesses, BASF shall, subject to customary confidentiality assurances and dependent on the stage of the divestiture process:
  - (a) provide to potential purchasers sufficient information as regards the Divestment Businesses;
  - (b) provide to potential purchasers sufficient information relating to the Personnel and allow them reasonable access to the Personnel.

### Reporting

11. BASF shall submit written reports in English on potential purchasers of the Divestment Businesses and developments in the negotiations with such potential purchasers to the



Commission and the Monitoring Trustee no later than 10 days after the end of every month following the Effective Date (or otherwise at the Commission's request).

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

#### **Section D. The Purchaser**

13. In order to ensure the immediate restoration of effective competition, any Purchaser, in order to be approved by the Commission, must:
  - (a) be independent of and unconnected to the Parties;
  - (b) have the financial resources, proven expertise and incentive to maintain and develop the Divestment Business(es) he intends to acquire as a viable and active competitive force in competition with the Parties and other competitors;
  - (c) neither be likely to create, in the light of the information available to the Commission, *prima facie* competition concerns nor give rise to a risk that the implementation of the Commitments will be delayed, and must, in particular, reasonably be expected to obtain all necessary approvals from the relevant regulatory authorities for the acquisition of the Divestment Business(es) (the before-mentioned criteria for the purchaser hereafter the "**Purchaser Requirements**").
14. The final binding sale and purchase agreements shall be conditional on the Commission's approval. When BASF has reached an agreement with a purchaser, it shall submit a fully documented and reasoned proposal, including a copy of the final agreement(s), to the Commission and the Monitoring Trustee. BASF must be able to demonstrate to the Commission that the purchaser meets the Purchaser Requirements and that the Divestment Business is being sold in a manner consistent with the Commitments. For the approval, the Commission shall verify that the purchaser fulfils the Purchaser Requirements and that the Divestment Business is being sold in a manner consistent with the Commitments. The Commission may approve the sale of the Divestment Business without one or more Assets or parts of the Personnel, if this does not affect the viability and competitiveness of the Divestment Business after the sale, taking account of the proposed Purchaser.

#### **Section E. Trustee**

##### **I. Appointment Procedure**

15. BASF shall appoint a Monitoring Trustee, and shall cause, as the case may be, Ciba to empower the Monitoring Trustee to carry out the functions specified in the Commitments for a Monitoring Trustee. If BASF has not entered into a binding sales and purchase agreement for one or several of the Divestment Businesses one month before the end of the First Divestiture Period or if the Commission has rejected a purchaser of a Divestment Business proposed by BASF at that time or thereafter, BASF shall appoint a Divestiture Trustee, and shall cause, as the case may be, Ciba to empower the Divestiture Trustee to carry out the functions specified in the

Commitments for a Divestiture Trustee. The appointment of the Divestiture Trustee shall take effect upon the commencement of the Extended Divestment Period.

16. The Trustee shall be independent of the Parties, possess the necessary qualifications to carry out its mandate, for example as an investment bank or consultant or auditor, and shall neither have nor become exposed to a conflict of interest. The Trustee shall be remunerated by the Parties in a way that does not impede the independent and effective fulfilment of its mandate. In particular, where the remuneration package of a Divestiture Trustee includes a success premium linked to the final sale value of the Divestment Business, the fee shall also be linked to a divestiture within the Trustee Divestiture Period.

*Proposal by the Parties*

17. No later than one week after the Effective Date, BASF shall submit a list of one or more persons whom BASF proposes to appoint as the Monitoring Trustee to the Commission for approval. No later than one month before the end of the First Divestiture Period, BASF shall submit a list of one or more persons whom BASF proposes to appoint as Divestiture Trustee to the Commission for approval. The proposal shall contain sufficient information for the Commission to verify that the proposed Trustee fulfils the requirements set out in paragraph 16 and shall include:
  - (a) the full terms of the proposed mandate, which shall include all provisions necessary to enable the Trustee to fulfil its duties under these Commitments;
  - (b) the outline of a work plan which describes how the Trustee intends to carry out its assigned tasks;
  - (c) an indication whether the proposed Trustee is to act as both Monitoring Trustee and Divestiture Trustee or whether different trustees are proposed for the two functions.

*Approval or rejection by the Commission*

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

*New proposal by the Parties*

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

*Trustee nominated by the Commission*

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

II. Functions of the Trustee

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

*Duties and obligations of the Monitoring Trustee*

22. The Monitoring Trustee shall:

- (i) propose in its first report to the Commission a detailed work plan describing how it intends to monitor compliance with the obligations and conditions attached to the Decision.
- (ii) oversee the on-going management of the Divestment Businesses with a view to ensuring its continued economic viability, marketability and competitiveness and monitor compliance by BASF with the conditions and obligations attached to the Decision. To that end the Monitoring Trustee shall:
  - (a) monitor the preservation of the economic viability, marketability and competitiveness of the Divestment Businesses, and the keeping separate of the Divestment Businesses from the business retained by the Parties, in accordance with paragraphs 5 and 6 of the Commitments;
  - (b) supervise the management of the Divestment Businesses as a distinct and saleable entity, in accordance with paragraph 7 of the Commitments;
  - (c) (i) in consultation with BASF and Ciba, determine all necessary measures to ensure that BASF and Ciba does not after the effective date obtain any business secrets, knowhow, commercial information, or any other information of a confidential or proprietary nature relating to the Divestment Businesses, in particular strive for the severing of the Divestment Business' participation in a central information technology network to the extent possible, without compromising the viability of the Divestment Businesses, and (ii) decide whether such information may be disclosed to BASF and Ciba as the disclosure is reasonably necessary to allow BASF and Ciba to carry out the divestiture or as the disclosure is required by law;
  - (d) monitor the splitting of assets and the allocation of Personnel between the Divestment Businesses and BASF and Ciba or Affiliated Undertakings of each BASF and Ciba;
  - (e) for the avoidance of doubt, (a) to (d) apply, *mutatis mutandis*, also to the Divestment Business HALS in the period between the Effective date and the Closing.

- (iii) assume the other functions assigned to the Monitoring Trustee under the conditions and obligations attached to the Decision;
- (iv) propose to BASF such measures as the Monitoring Trustee considers necessary to ensure BASF's compliance with the conditions and obligations attached to the Decision, in particular the maintenance of the full economic viability, marketability or competitiveness of the Divestment Businesses, the holding separate of the Divestment Businesses and the non-disclosure of competitively sensitive information;
- (v) review and assess potential purchasers as well as the progress of the divestiture process and verify that, dependent on the stage of the divestiture process, (a) potential purchasers receive sufficient information relating to the Divestment Businesses and the Personnel in particular by reviewing, if available, the data room documentation, the information memorandum and the due diligence process, and (b) potential purchasers are granted reasonable access to the Personnel;
- (vi) provide to the Commission, sending BASF a non-confidential copy at the same time, a written report within 15 days after the end of every month. The report shall cover the operation and management of the Divestment Businesses so that the Commission can assess whether the businesses are held in a manner consistent with the Commitments and the progress of the divestiture process as well as potential purchasers. In addition to these reports, the Monitoring Trustee shall promptly report in writing to the Commission, sending BASF a non-confidential copy at the same time, if it concludes on reasonable grounds that BASF is failing to comply with these Commitments;
- (vii) within one week after receipt of the documented proposal referred to in paragraph 14, submit to the Commission a reasoned opinion as to the suitability and independence of the proposed purchaser and the viability of any of the Divestment Businesses after the Sale and as to whether all of the Divestment Business are sold in a manner consistent with the conditions and obligations attached to the Decision, in particular, if relevant, whether the Sale of a Divestment Business without one or more Assets or not all of the Personnel affects the viability of that Divestment Business after the sale, taking account of the proposed purchaser.

*Duties and obligations of the Divestiture Trustee*

23. Within the Trustee Divestiture Period, the Divestiture Trustee shall sell at no minimum price the Divestment Business(es) to one or several purchasers, provided that the Commission has approved both the purchaser(s) and the final binding sale and purchase agreement(s) in accordance with the procedure laid down in paragraph 14. The Divestiture Trustee shall include in the sale and purchase agreement(s) such terms and conditions as it considers appropriate for an expedient sale in the Trustee Divestiture Period. In particular, the Divestiture Trustee may include in the sale and purchase agreement(s) such customary representations and warranties and indemnities as are reasonably required to effect the sale. The Divestiture Trustee shall protect the legitimate financial interests of BASF, subject to the Parties' unconditional obligation to divest at no minimum price in the Trustee Divestiture Period.

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

### III. Duties and obligations of the Parties

25. BASF shall provide and shall cause its advisors to provide the Trustee with all such cooperation, assistance and information as the Trustee may reasonably require to perform its tasks. The Trustee shall have full and complete access to any of BASF's or the Divestment Businesses' books, records, documents, management or other personnel, facilities, sites and technical information necessary for fulfilling its duties under the Commitments and BASF shall provide, and shall cause Ciba or, where possible, the Divestment Businesses, to provide, the Trustee upon request with copies of any document. BASF shall make available, or shall cause Ciba or, where possible, the Divestment Businesses, to make available, to the Trustee one or more offices on their premises and shall be available for meetings in order to provide the Trustee with all information necessary for the performance of its tasks.
26. BASF shall provide, or shall cause Ciba to provide, the Monitoring Trustee with all managerial and administrative support that it may reasonably request on behalf of the management of the Divestment Businesses. This shall include all administrative support functions relating to the Divestment Businesses which are currently carried out at headquarters level. BASF shall provide and shall cause its advisors to provide the Monitoring Trustee, on request, with the information submitted to potential purchasers, in particular give the Monitoring Trustee access to the data room documentation and all other information granted to potential purchasers in the due diligence procedure. BASF shall inform, or shall cause Ciba to inform, the Monitoring Trustee on possible purchasers, submit a list of potential purchasers, and keep the Monitoring Trustee informed of all developments in the divestiture process.
27. BASF shall grant, or procure Ciba and Affiliated Undertakings to grant, comprehensive powers of attorney, duly executed, to the Divestiture Trustee to effect the sale, the Closing and all actions and declarations which the Divestiture Trustee considers necessary or appropriate to achieve the sale and the Closing, including the appointment of advisors to assist with the sale process. Upon request of the Divestiture Trustee, BASF shall cause the documents required for effecting the sale and the Closing to be duly executed.
28. BASF shall indemnify the Trustee and its employees and agents (each an "***Indemnified Party***") and hold each Indemnified Party harmless against, and hereby agrees that an Indemnified Party shall have no liability to BASF for any liabilities arising out of the performance of the Trustee's duties under the Commitments, except to the extent that such liabilities result from the wilful default, recklessness, gross negligence or bad faith of the Trustee, its employees, agents or advisors.
29. At the expense of BASF, the Trustee may appoint advisors (in particular for corporate finance or legal advice), subject to BASF's approval (this approval not to be unreasonably withheld or delayed) if the Trustee considers the appointment of such advisors necessary or appropriate for the performance of its duties and obligations under the Mandate, provided that any fees and other expenses incurred by the Trustee are

reasonable. Should BASF refuse to approve the advisors proposed by the Trustee the Commission may approve the appointment of such advisors instead, after having heard BASF. Only the Trustee shall be entitled to issue instructions to the advisors. Paragraph 29 shall apply *mutatis mutandis*. In the Trustee Divestiture Period, the Divestiture Trustee may use advisors who served BASF during the Divestiture Period if the Divestiture Trustee considers this in the best interest of an expedient sale.

#### IV. Replacement, discharge and reappointment of the Trustee

30. If the Trustee ceases to perform its functions under the Commitments or for any other good cause, including the exposure of the Trustee to a conflict of interest:
- (a) the Commission may, after hearing the Trustee, require BASF to replace the Trustee; or
  - (b) BASF, with the prior approval of the Commission, may replace the Trustee.
31. If the Trustee is removed according to paragraph 30, the Trustee may be required to continue in its function until a new Trustee is in place to whom the Trustee has effected a full hand over of all relevant information. The new Trustee shall be appointed in accordance with the procedure referred to in paragraphs 15-20.
32. Beside the removal according to paragraph 30, the Trustee shall cease to act as Trustee only after the Commission has discharged it from its duties after all the Commitments with which the Trustee has been entrusted have been implemented. However, the Commission may at any time require the reappointment of the Monitoring Trustee if it subsequently appears that the relevant remedies might not have been fully and properly implemented.

#### **Section F. Binding Effect of Commitments**

33. BASF's commitment to procure the divestiture of the Divestment Businesses in accordance with Section B and all other commitments of BASF hereunder notwithstanding, all commitments given by BASF to procure that Ciba comply with the Commitment to divest, the Related Commitments and all other commitments requiring any action or omission by Ciba shall, as long as BASF has not assumed effective control over the day to day management of Ciba by way of a domination agreement or a similar restructuring, be interpreted only as an obligation on BASF to use, to the extent permitted by law, its influence as majority shareholder to cause Ciba to act accordingly.

#### **Section G. The Review Clause**

34. The Commission may, where appropriate, in response to a request from BASF showing good cause and accompanied by a report from the Monitoring Trustee:
- (i) Grant an extension of the time periods foreseen in the Commitments, or
  - (ii) Waive, modify or substitute, in exceptional circumstances, one or more of the undertakings in these Commitments.

Where BASF seeks an extension of a time period, it shall submit a request to the Commission no later than one month before the expiry of that period, showing good cause.

Only in exceptional circumstances shall BASF be entitled to request an extension within the last month of any period.

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Dr. Frank Montag

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Dr. Andreas von Bonin

duly authorised for and on behalf of BASF

## SCHEDULE A

### DIVESTMENT BUSINESS DMA3

1. The Divestment Business as operated to date has the following legal and functional structure:

- (a) The DMA3 plant at [...] is owned and operated by BASF SE, a company registered at Ludwigshafen, Germany (Registration No.: HRB 6000) (**BASF**). Except as specified elsewhere in this Schedule, the [...] Divestment Business includes DMA3 production assets (including the DMA3 production line, DMA3 storage tanks and a DMA3 loading station).
- (b) The organisation of the Divestment Business as part of BASF's Global Business [...] is as follows:

[...]

2. Following paragraph 4 of these Commitments, the Divestment Business includes, but is not limited to:

- (a) the following main tangible assets:
  - (i) the DMA3 production unit with a name plate capacity of [...]kt/year located in the Building [...], [...] site (details of the assets can be found in Annex Schedule A (1));
  - (ii) [...] DMA3 product tanks ([...]) located in [...] (please see Annex Schedule A (1)), including inventories; and
  - (iii) the DMA3 loading station located in [...] (for further information on the location of this and other tangible assets listed above, please see maps of the assets set out at various levels of the DMA3 plant at Annex Schedule A (2)).
- (b) the following main intangible assets:
  - (i) the Operation Manual incl. P&ID (Process & Instrumentation Diagrams).
- (c) the following main licences, permits and authorisations:
  - (i) non-exclusive licences of the patents WO 02/100814, WO 02/100815 and WO 02/100817;
  - (ii) a production permit ([...]).
- (d) the following main contracts, agreements, leases, commitments and understandings:

---

<sup>1</sup> [...]



- (i) BASF's DMA3 supply contract to customer [...] (see Annex Schedule A (3), [...]);
- (ii) BASF's DMA3 supply contract to customer [...] (see Annex Annex Schedule A(4), [...]);
- (iii) Supply of raw materials for the production of DMA3: BASF will enter into a long-term supply agreement with the Purchaser to supply them with key raw materials for the production of DMA3, namely, [...]²– and dimethylamino ethanol (“DMAE”).
  - (A) [...] could be supplied, at the choice of the Purchaser, on the basis of a swap agreement or via a long-term contract based on the following pricing formula: [...], whereby
 

[...]³.
  - (B) DMAE could be supplied, at the choice of the Purchaser, on the basis of a swap agreement or via a long-term contract based on the following pricing formula: [...], whereby
 

[...].
- (e) the following customer, credit and other records:
  - (i) [...]⁴;
- (f) The following Key Personnel (if requested by the Purchaser):
  - (i) [...] - if requested by the Purchaser – serve as Technical Supervisor for the Purchaser in order to:
    - determine, plan and supervise necessary maintenance measures;
    - monitor DMA3 product quality;
    - troubleshoot in case of quality and technical issues;
    - improve the operation of the DMA3 production line as well as to increase its capacity by debottlenecking measures;
    - take responsibility for all permits and all kind of service agreements between the DMA3 operation and BASF as service provider.

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² [...].

³ [...].

⁴ [...].

[...].

(g) The following Personnel (if requested by the Purchaser):

(i) [...]. [...] employment may also be transferred to the Purchaser, subject to discussions;

3. In addition to the assets and Personnel comprising the Divestment Business as described above, BASF is prepared to enter into the following arrangements to support the Purchaser's ownership of the DMA3 production assets at [...], to maintain the economic viability and competitiveness of the Divestment Business:

(a) Operation of DMA3 plant: By BASF on behalf of the Purchaser on the basis of a long-term agreement. An example of a typical BASF co-siting agreement (and related site support service agreements) is provided at Annex Schedule A (5), [...].

(b) Lease of Building [...]: By BASF to the Purchaser on the basis of a long-term agreement.

(c) Loading of DMA3 product on trucks or filling containers: By BASF on behalf of the Purchaser on the basis of a long-term agreement.

(d) Provision of utilities: By BASF on the basis of standardized long-term arrangements with other third parties operating at the [...] site.

(e) Other services (plant maintenance, DCS (distributed control system), lab analysis, others as requested by the Purchaser): By BASF on behalf of the Purchaser on the basis of a long-term agreement.

(f) Supply of raw materials for the production of DMA3: BASF is in a position to offer the Purchaser long-term supply agreements for the key raw materials ([...], DMAE). Raw materials could either be supplied via long-term contract or supplied by the Purchaser via swap, as the plant is supplied by pipeline and is unable to take in external raw materials physically.

(g) [...].

(h) Waste<sup>5</sup>, waste water and off-gas treatment: By BASF on behalf of the Purchaser (part of site permit) on the basis of a long-term agreement.

4. The Divestment Business shall not include:

(a) The logistics function to execute shipments of DMA3 from the DMA3 production line to the customer. This function can be performed by the Purchaser itself or it can be outsourced to any logistics provider such as [...].

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<sup>5</sup> [...]. Waste gas and liquids are handled by BASF and are part of the above mentioned service agreements that a Purchaser would be asked to enter into.

- (b) Building [...], that houses the assets to be transferred, and all other equipment in Building [...];
- (c) Land on which the Building [...], the DMA3 tanks and the DMA3 loading station is located;
- (d) All other tanks in the tank farm [...] and all other loading stations; and
- (e) All pipes and pipe racks.

## SCHEDULE A – TABLE OF ANNEXES

<b>No</b>	<b>Title</b>
1	Fixed assets at the [...] DMA3 plant
2	[...] DMA3 site maps
3	BASF's DMA3 supply contract with customer [...]
4	BASF's DMA3 supply contract with customer [...]
5	Draft Site support contracts for [...]: [...]: [...]

**ANNEX SCHEDULE A(1) – Fixed assets at the [...] DMA3 plant**

[...]

**ANNEX SCHEDULE A (2) – [...] DMA3 site maps**

[...]

**ANNEX SCHEDULE A(3) –BASF’s DMA3 supply contract with customer [...]**

**[...]**

**ANNEX SCHEDULE A(4) – BASF’s DMA3 supply contract with customer [...]**

[...]



**ANNEX SCHEDULE A (5) – Draft Site support contracts for [...]: [...]:**

[...]

## SCHEDULE B

### DIVESTMENT BUSINESS – SYNTHETIC DRY STRENGTH AGENTS

1. The Divestment Business as operated to date has the following legal and functional structure:

- (a) Ciba's semi-synthetic dry strength business is integrated into the paper chemicals plant at its Kaipiainen (Finland) production site. The production of the Divestment Business as part of Ciba's Segment Water & Paper Treatment is organised as follows:

[...]

2. Following paragraph 4 of the Commitment Document, the Divestment Business includes, but is not limited to:

- (a) The following main tangible assets:

- (i) Ciba's dedicated semi-synthetic dry strength production line for the semi-synthetic dry strength product [...] with a capacity of [...]kt/year, located at Ciba's [...], Siilotie 5, 46400 Kaipiainen, (Finland); (See Annex Schedule B. (1) and (2) for more details on location and layout of the paper chemicals plant);
- (ii) Production vessels (including [...] reactor / slurry tank and [...] control tank); (See equipment list in Annex Schedule B. (3));
- (iii) [...] specialty production storage tanks; (See equipment list in Annex Schedule B. (3));
- (iv) Inventories.

- (b) The following main intangible assets:

- (i) Operation manual including P&ID (Process & Instrumentation Diagrams);
- (ii) Licence of the patent EP1099022 ([...]);
- (iii) Manufacturing instructions;
- (iv) Recipes;
- (v) Technical assistance during interim period to buyer.

- (c) The benefit of two main licenses required for industrial chemical activities in Finland:

- (i) License to store and handle hazardous chemicals ("Lupa terveydelle ja ympäristölle vaarallisen kemikaalin laajamittaiseen ja teolliseen käsittelyyn") provided by "Turvatekniikan keskus";

- (ii) Environmental license (“Ympäristölupa”) provided by “Ympäristökeskus”.

During a transitory period the licences currently held by Ciba would stay in place until the Purchaser could apply for and receive a new licence.

- (d) The following main contracts, agreements, leases, commitments and understandings:
  - (i) Ciba’s supply contract to customer [...] (Ciba’s largest EEA synthetic dry strength customer).
- (e) The following customer, credit and other records:
  - (i) A customer list for the products produced at Kaipiainen, including [...];
  - (ii) A customer list for the synthetic dry strength product [...] at [...], including [...];
  - (iii) A customer list for the synthetic dry strength products [...] and [...], including [...].
- (f) The following Key Personnel: None.
- (g) The following Personnel (if requested by the Purchaser):
  - (i) Marketing personnel ([..] FTE).

3. In addition to the assets and personnel comprising the Divestment Business as described above, Ciba is prepared to enter into the following agreements to support the Purchaser’s ownership of the semi-synthetic dry strength production assets at Kaipiainen, to maintain the economic viability and competitiveness of the Divestment Business:

- (a) Operation of semi-synthetic dry strength production line (as part of the paper chemicals plant): By the Parties on behalf of the purchaser on the basis of a long-term agreement;
- (b) *Storage agreement* for the raw materials used for the [...] product;
- (c) *Energy (Steam, gas and electricity, water)*: Those inputs would be supplied by the Parties to the Purchaser on site based on existing agreements;
- (d) *Plant maintenance*: Contract with third party maintenance company to be concluded (choice for Purchaser to use the vendor currently serving the entire site or a new one);
- (e) *Waste water pre-treatment facility*: Contractual agreement with the Parties to be entered into to participate in waste water pre-treatment arrangements for the entire site;
- (f) *Solid waste disposal*: Contract with third party waste disposal company to be concluded (choice for Purchaser to use the vendor currently serving the entire site or a new one);
- (g) *Roadways and maintenance thereof* will be charged on an allocation basis;

- (h) *Environment & health safety, fire fighting & security service*: Contractual agreement with the Parties to be entered into to participate in arrangements for the entire site;
  - (i) *Other shared services*: Arrangements with the Parties or third parties (at the choice of Purchaser) to cater for other services (e.g. canteen, freight arrangements, automation support).
4. The Parties propose to enter into a toll manufacturing agreement with the Purchaser for the semi-synthetic dry strength products [...] since these products are produced on shared production assets at Kaipainen.
5. Furthermore, the Parties will enter into a toll-manufacturing agreement with the Purchaser for the synthetic dry strength product [...] produced at [...] together with the respective trademark.
6. The Parties will also transfer the existing toll-manufacturing agreement with [...] for two synthetic dry strength products ([...]).
7. The Divestment Business shall not include:
- (a) The sale of any roadways, energy service gantries, pipelines, buildings and land;
  - (b) Any equipment outside the boundaries of the purchased assets, which will belong to the seller and may be the basis for charges of usage (e.g. meters).
  - (c) Non-dedicated production equipment.

## SCHEDULE B –ANNEXES

<b>No</b>	<b>Title</b>
1	Map of the Kaipainen site
2	Layout of Ciba's [...] plant
3	Production equipment for the Divestment Business

**Annex Schedule B. (1): Map of the Kaipainen site**

[...]

**Annex Schedule B. (2) – Layout of Ciba’s [...] plant**

[...]

**Annex Schedule B. (3) : Production equipment for the Divestment Business**

[...]



## SCHEDULE C

### DIVESTMENT BUSINESS BV

1. The Divestment Business, as operated to date, has the following legal and functional structure:

Ciba's global BV business includes the [...] BV production plant which is owned and operated by Ciba [...], a company organized under the laws of [...] and a wholly owned indirect subsidiary of the Ciba Holding AG. It is located at [...].

2. Following paragraph 4 of these Commitments, the Divestment Business includes, but is not limited to:

- (a) The green shaded area of the map of Annex Schedule C (1) shows the location of buildings [...] of the [...] site, in which the production equipment for
- (i) the BV synthesis and encapsulation ([...]);
  - (ii) the BV finishing ([...]); and
  - (iii) auxiliary equipment for waste water pre-treatment ([...]) is contained.

The following table lists the tangible production assets:

**Table 1: Tangible production assets of the [...] BV business**  
[...]

- (iv) the inventories;
  - (v) the benefit of all current supporting arrangements under which Ciba or Affiliated Undertakings supply products or services to the Divestment Business BV, in particular relating to energy supply, plant maintenance, waste water treatment and solid waste disposal.
- (b) the following main intangible assets:
- (i) Product specifications know-how in relation to products and the production process, including
    - (A) the provision of technical and safety information, operation manuals, risk analysis related documents, layout drawings, process and instrumentation diagrams (PID), raw material specifications, end product specifications, certificates of analysis;
    - (B) the Parties' best efforts to transfer dedicated production personnel if requested by the Purchaser.

The parties would be prepared to divest the BV specific patent families on composition and on production hold by Ciba. As far as the composition patents also concern products not related to the BV business, access to these patents will be granted via licences.

**Table 2: Ciba Patents for BV**

Status	Publication No.	Short Title
Granted	DE 4037878 FR 2655052	Process for stabilising BV pigments against attack by hydrochloric acid
Granted	EP 430888	Process for preparing BV pigments and BV pigments of high tinting strength.
Granted	EP 816440	BV pigment powder mixtures
Granted	EP810268	BV pigments coated with polyvinyl alcohol
Granted	EP810269	Transparent BV pigments
Granted	-	Redly bv pigments for pigmenting of high-molecular organic materials such as laquers, plastics and printing inks
Pending	WO07/057327	Powder coating composition comprising bv and organic phosphorus stabilizers
Pending	EP 1622834	Bismuth containing pigment solid solutions
Pending	EP 1948744	Stabilisers for thermosetting powder coating compositions

- (c) the following main licenses, permits and authorizations as far as a transfer is required and legally possible:
- (i) environmental permit issued by [...];
  - (ii) waste water, discharge and ground water withdrawal permits issued by water authorities;
  - (iii) building permits.
- (d) the main contracts, agreements, leases, commitments and understandings;
- (e) the customers, credit and other records;
- (f) The following Key Personnel (if requested by the Purchaser):
- (i) [...] production unit head
- (g) The following Personnel (if requested by the Purchaser):
- (i) [...] production engineer
  - (ii) [...] foreman
  - (iii) [...] shift managers
  - (iv) [...] operators for chemical production in 4 shifts

- (v) [...] operators for finishing
  - (vi) [...] operators for effluent treatment
3. The divestment will generally not include
- (a) assets and personnel in relation to businesses of the [...] site other than those dedicated to the Divestment Business;
  - (b) assets and personnel in relation to the BV business that will not be divested are the shared maintenance workshop, the shared warehouse for finished products, shared on site transportation services, shared IT systems, shared personnel resources for site overhead functions like engineering, environmental, health and safety (EHS), plant support laboratory, product safety, quality control, purchasing, materials management, human resources, finance.

## SCHEDULE C – TABLE OF ANNEXES

No	Title
6 1	Annex Schedule C (1): [...] site map

**Annex Schedule C (1) : Annex Schedule C (1): [...] site map**

[...]

## SCHEDULE D

### DIVESTMENT BUSINESS IB

1. The Divestment Business, as operated to date, has the following legal and functional structure:

Ciba's global IB business to be divested is part of the [...] plant which is owned and operated by Ciba SA, a company organised under the laws of [...] and a wholly owned direct subsidiary of the Ciba Holding AG. The plant is located at [...].

2. Following paragraph 4 of these Commitments, the Divestment Business includes, but is not limited to:

(a) The following main tangible assets:

(i) IB inventories.

(ii) No further tangible assets are part of the divestment.

(b) the following main intangible assets:

(i) All of Ciba's know-how for the finishing of IB, including

(A) the provision of technical and safety information required for the production of Ciba IB products and their additives, operation manuals, equipment specifications, flow sheets, process and instrumentation diagrams, risk analysis, raw material specifications, end product specifications, certificates of analysis (see for further details of the manufacturing know how Annex Schedule D (1));

(B) training and instruction of key personnel and technical assistance until such time when the Purchaser is able to manufacture the IB itself;

(ii) [...].

(c) No licenses permits and authorizations are part of the business to be divested.

(d) the following main contracts, agreements, leases, commitments and understandings: Apart from supply agreements with customers (see below at item (e)) no agreements are part of the business to be divested.

(e) the customer, credit and other records;

(f) The following Key Personnel: None

(g) The following Personnel: None

(h) During a transitional period of up to [...] the Parties will finish IB for the Purchaser (toll-manufacturing).

3. The divestment will generally not include
  - (c) assets in relation to other businesses than Ciba's IB business of the [...] site;
  - (d) production assets.

## SCHEDULE D – TABLE OF ANNEXES

No	Title
1	Annex Schedule (1): Raw materials and production process description



**ANNEX SCHEDULE D (1) : Annex Schedule (1): Raw materials and production process description**

[...]

## SCHEDULE F

### KAIPAINEN – SA / PVAc / AA PRODUCTION ASSETS

1. The Divestment Business as operated to date has the following legal and functional structure:

- (a) The SA / PVAc / AA plant at Kaipainen is owned and operated by Ciba, a company registered under the laws of Switzerland. The production of the Divestment Business as part of Ciba's Segment Paper & Water Treatment is organised as follows:

[...]

2. Following paragraph 4 of the Commitment Document, the Divestment Business includes, but is not limited to:

- (b) The following main tangible assets:

(i) The building in which the SA / PVAc / AA production unit is located, at Siilotie 5, 46400, Kaipainen (Finland); (See Annex Schedule F. (1), (2) and (3) for more details on location and layout of the production plant);

(ii) Ciba's SA / PVAc / AA production unit (consisting of [...] production lines with full scale reactors) with a capacity of [...]kt/year:

[...].

(iii) [...] batch stripper ([...]);

(iv) [...] pilot reactors ([...]) and ([...]);

(v) [...] raw material storage tanks ([...]; [...]);

(vi) [...] bulk storage tanks ([...]t of product storage capacity);

(vii) Inventories;

(viii) The tangible assets listed in the equipment list at Annex Schedule F. (4).

- (c) The following main intangible assets:

(i) The Operation manual including P&ID (Process & Instrumentation Diagrams);

(ii) Manufacturing instructions;

(iii) On request by the Purchaser: the transfer of the trademark “[...]”.

- (d) The benefit of the two main licences required for industrial chemical activities in Finland:

- (i) License to store and handle hazardous chemicals (“Lupa terveydelle ja ympäristölle vaarallisen kemikaalin laajamittaiseen ja teolliseen käsittelyyn”) provided by ”Turvatekniikan keskus”;
- (ii) Environmental license (“Ympäristölupa”) provided by “Ympäristökeskus”.

During a transitory period the licences currently held by Ciba would stay in place until the Purchaser could apply for and receive a new licence.

- (e) The following main contracts, agreements, leases, commitments and understandings:
  - (i) Ciba’s supply contract to customer [...] (Ciba’s largest EEA SA / PVAc / AA customer);
  - (ii) Ciba’s toll manufacturing agreement with [...] for an output of [...] tons per month of [...] latex (which runs at least until [...]);
  - (iii) Ciba’s contract with [...] for the supply of vinyl acetate;
  - (iv) Ciba’ contract with [...] for the supply of butyl acrylate.
- (f) The following customer, credit and other records:
  - (i) A customer list, including [...].
- (g) The following Key Personnel (if requested by the Purchaser):
  - (i) SA / PVAc / AA plant manager at Kaipainen ([...]);
  - (ii) SA / PVAc / AA production supervisor ([...]);
  - (iii) SA / PVAc / AA production support supervisor ([...]);
- (h) The following Personnel (if requested by the Purchaser):
  - (i) [...] quality control technician (FTE), pilot plant operators ([...] FTE), production shift workers ([...] FTE).
  - (ii) R&D personnel ([...] FTE); and
  - (iii) Sales & Marketing personnel ([...] FTE).

3. In addition to the assets and personnel comprising the Divestment Business as described above, Ciba is prepared to enter into the following agreements to support the Purchaser’s ownership of the SA / PVAc / AA production assets at Kaipainen, to maintain the economic viability and competitiveness of the Divestment Business:

- (a) *Land lease*: the Parties will enter into a long term lease agreement with the Purchaser for the land that is used and required rights of way.
- (b) *Supply of raw materials* for the production of SA / PVAc / AA. Unless not required by the Purchaser, the Parties will enter into a long-term supply agreement for raw materials (namely styrene, acrylonitrile and hydrogen peroxide) for the production

of SA / PVAc / AA at procurement cost plus reasonable service fee (deloading and maintenance of tank farm);

- (c) *Storage agreement* for styrene and acrylonitrile in the tanks of Ciba's Kaipiainen [...] plant and for hydrogen peroxide in Ciba's tank at its Kaipiainen [...] plant;
  - (d) *Energy (Steam, gas and electricity, water)*: Those inputs would be supplied by the Parties to the Purchaser on site based on existing agreements;
  - (e) *Plant maintenance*: Contract with third party maintenance company to be concluded (choice for Purchaser to use the vendor currently serving the entire site or a new one);
  - (f) *Waste water pre-treatment facility*: Contractual agreement with the Parties to be entered into to participate in waste water pre-treatment arrangements for the entire site;
  - (g) *Solid waste disposal*: Contract with third party waste disposal company to be concluded (choice for Purchaser to use the vendor currently serving the entire site or a new one);
  - (h) *Roadways and maintenance thereof* will be charged on an allocation basis;
  - (i) *Environment & health safety, fire fighting & security service*: Contractual agreement with the Parties to be entered into to participate in arrangements for the entire site;
  - (j) *Other shared services*: Arrangements with the Parties or third parties (at the choice of Purchaser) to cater for other services (e.g. canteen, freight arrangements, automation support).
4. [...].
5. [...].
6. The Divestment Business shall not include:
- (a) The sale of any roadways, energy service gantries, pipelines, buildings (other than the one in which the SA / PVAc / AA production unit is located) and land;
  - (b) Any equipment outside the boundaries of the purchased assets, which will belong to the seller and may be the basis for charges of usage (e.g. meters).

## SCHEDULE F. –ANNEXES

<b>No</b>	<b>Title</b>
1	Map of the Kaipainen site
2	Layout of the Kaipainen site
3	Layout of the SA / PVAc / AA production unit
4	Production equipment for the Divestment business

**Annex Schedule F. (1) : Map of the Kaipainen site**

[...]

## **Annex Schedule F. (2) : Layout of the Kaipainen site**

[...]

**Annex Schedule F. (3) : Layout of the SA / PVAc / AA production unit**

[...]



**Annex Schedule F. (4) : Production equipment for the Divestment business**

[...]

## SCHEDULE G

### COMMITMENT HALS

1. Under the Commitment HALS, BASF will divest the Divestment Business HALS. The Divestment Business HALS as operated to date has the following legal and functional structure:

The Divestment Business HALS is part of Ciba's Plastic Additives business.

2. Following paragraph 4 of these Commitments, the Divestment Business HALS includes:

(a) the following main tangible assets:

The following main equipment fully dedicated to Chimassorb 119 FL synthesis and work-up located in buildings [...] of Ciba's [...] site (see Annex Schedule G (1) for a site plan) (the *Chimassorb Production Assets*):

[...]

Details of the Chimassorb Production Assets are provided in Annex Schedule G (2).

(b) the following main intangible assets:

(i) Know-how consisting in the process description and operating procedure for Chimassorb 119 FL as provided in Annex Schedule G (3).

(ii) An exclusive non-transferrable licence to the Chimassorb 119 FL brand name for an interim period only.

(c) the following main contracts, agreements, leases, commitments and understandings:

Contracts with customers for Chimassorb 119 FL which are running at the date of Closing.

(d) the following customer, credit and other records:

A customer list, indicating sales in 2007, as included in Annex Schedule G (4).

(e) [...]

(f) [...]

3. [...]

4. The Divestment Business HALS shall not include:

Any sales and marketing organisation, logistics, R&D or back office functions.

## SCHEDULE G – TABLE OF ANNEXES

No	Title
1	Map of the [...] site
2	Detailed description of Chimassorb Production Assets
3	Process description and operating procedure for Chimassorb 119 FL
4	Chimassorb 119 FL customer list & sales

**ANNEX SCHEDULE G(1)-MAP OF [...] SITE**

**[...]**

**ANNEX SCHEDULE G (2) - DETAILED DESCRIPTION OF CHIMASSORB PRODUCTION**

[...]

**ANNEX SCHEDULE G (3) - PROCESS DESCRIPTION AND OPERATING PROCEDURE FOR**

**CHIMASSORB 119FL**

[...]

**ANNEX SCHEDULE G (4) - CHIMASSORB 119 FL CUSTOMER LIST & SALES**

**[...]**

## SCHEDULE H

### COMMITMENT UV FILTER

1. Under the Commitment UV Filter, BASF will conclude, or will cause Ciba to conclude, the UV Filter Licence Agreement with the Licensee and to enter into the Substantive Obligation UV Filter.

2. Following paragraph 4 of these Commitments, the UV Filter Licence Agreement consists of the transfer to the Licensee of the following:

(a) the following main intangible assets:

- (i) A sole, fully paid-up, perpetual, royalty free licence without the right to grant sublicences to the patent EP 0 775 698 B (and its foreign counterparts) protecting bis-resorcinytriazine and relating to the production of Ciba's Tinosorb S, for the worldwide manufacture and sale of a UV filter product equivalent to Ciba's Tinosorb S (the *licensed UV Filter*).
- (ii) A sole, fully paid-up, perpetual, royalty free licence without the right to grant sublicences to the patent EP 1 280 505 B (and its foreign counterparts) protecting photostable compositions comprising bis-resorcinytriazine in combination with a dibenzoylmethane UV absorber, for the worldwide manufacture and sale of the licensed UV Filter.
- (iii) Provision of all technical and safety information required for the production of bis-resorcinytriazine, including:
  - production process information,
  - operation manuals,
  - flow sheets,
  - P&ID diagrams,
  - risk analysis,
  - safety assessment for human use including ecological assessments,
  - raw materials specifications,
  - certificates of analysis,
  - analytical methods for in-process and quality assurance,
  - end product specifications.

(b) the availability of the following main licences, permits and authorisations:

- (i) the existing, necessary authorisations for the use of bis-resorcinytriazine as a UV filter for skin care granted by the competent administrative authorities



(including the necessary technical support for the transfer of such authorisations and product accreditations)

3. BASF is prepared to enter into the following arrangements to support the UV Filter Licence Agreement and to maintain its economic viability and competitiveness (the Substantive Obligation UV Filter):

- (a) On request of the Licensee BASF will supply the Licensee with [...] pursuant to a supply agreement for a transitional period of [...] after Closing.
- (b) On request of the Licensee BASF will provide technical assistance and access to their relevant engineering teams, as well as technical training reasonable necessary to enable the Licensee to manufacture bis-resorcinyl-triazine and its precursor product [...].
- (c) On request of the Licensee, BASF will toll manufacture bis-resorcinyl-triazine for the Licensee, either through its own production or through its toll manufacturers, for a transitional period of [...] after Closing.

4. The Commitment UV Filter shall not include:

- (a) Any customer lists, sales and marketing organisation, logistics, R&D or back office functions.