

***Case No COMP/M.5927 -
BASF / COGNIS***

Only the English text is available and authentic.

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

Article 6(1)(b) in conjunction with Art 6(2)
Date: 30/11/2010

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EUROPEAN COMMISSION

Brussels, 30/11/2010

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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 Where possible the information omitted has been replaced by ranges of figures or a general description.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.5927 – BASF/ Cognis
Notification of 8 October 2010 pursuant to Article 4 of Council Regulation
No 139/2004¹**

1. On 8 October 2010, the Commission received a notification of a proposed concentration pursuant to Article 4 of the Merger Regulation by which BASF SE ("BASF", Germany) acquires within the meaning of Article 3(1)(b) of the Merger Regulation sole control of Cognis GmbH ("Cognis", Germany), by way of purchase of shares.

I. THE PARTIES

2. BASF SE ("BASF") is the world's largest chemical company headquartered in Ludwigshafen, Germany. Its activities range from chemicals to crude oil and natural gas, including specialty chemicals, plastics, performance products, functional solutions and agricultural solutions, among others. BASF has production sites in 41 countries.
3. Cognis GmbH ("Cognis") is a private company which is active worldwide as supplier of specialty chemicals and nutritional ingredients. Cognis is also active in care chemicals and

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

functional products, inter alia, and it operates production sites and service centres in 30 countries.

II. THE OPERATION AND THE CONCENTRATION

4. BASF, through a subsidiary, intends to acquire 100% of the share capital of Cognis. Following the transaction, BASF will have sole control over Cognis.
5. The operation constitutes a concentration within the meaning of Article 3(1)(b) of the Merger Regulation.

III. EU DIMENSION

6. The undertakings concerned have a combined aggregate world-wide turnover of more than EUR 5 000 million (BASF: EUR 50 693 million, Cognis: EUR 2 584 million in 2009)². Each of them has an EU-wide turnover in excess of EUR 250 million (BASF: EUR [...] million, Cognis EUR [...] million in 2009), but they do not achieve more than two-thirds of their aggregate EU-wide turnover within one and the same Member State. The notified operation therefore has an EU dimension.

IV. COMPETITIVE ASSESSMENT

A. Horizontal overlaps

7. BASF and Cognis have overlapping activities in a large number of areas. However, several horizontal overlaps do not lead to combined market shares exceeding 15% under any plausible market definition. In view of the small combined market shares, the Commission considers that in those areas the transaction will not lead to competition concerns resulting from horizontal overlaps³. This concerns the following markets including potential submarkets: alcohols, cationic surfactants, esters (except for synthetic lubricants), solvents, lubricant additives, mining chemicals, fire protection chemicals, lutein, polyunsaturated fatty acids and pharmaceutical excipients⁴.

1. Surfactants

8. Both parties are active in the production and distribution of various types of surfactants. The activities overlap in relation to so-called anionic, non-ionic and cationic surfactants. For cationic surfactants the combined market shares do not exceed 15%. In relation to amphoteric surfactants only Cognis is active. Amphoteric surfactants are dealt with in Section B.

² Turnover calculated in accordance with Article 5(1) of the Merger Regulation.

³ Both parties produce conjugated linoleic acid. However this product is produced under licence. One of the parties is licensed to produce for human consumption and the other for animal feed. The proposed transaction will not therefore have any structural effects on the market for conjugated linoleic acid.

⁴ Where vertically affected markets arise, these are dealt with in Section B below.

1.1. Relevant product market

9. Surfactants (surface active agents) are substances that exert their physical influence at the boundary between a liquid and a gaseous phase or at the interface of solid substances and surrounding liquids. They are employed in the consumer goods sector as ingredients for detergents, cleaners and personal care products and in the industrial sector as processing aids.
10. In line with previous Commission decisions⁵, BASF considers that there are four distinct product markets for surfactants: 1) anionic surfactants, 2) non-ionic surfactants, 3) cationic surfactants and 4) amphoteric surfactants. The distinction is based on the ionic (electrical charge) properties in water of the different surfactant segments, which is a function of their composition and, indirectly, of the production process used.
11. The market investigation has broadly confirmed the existence of the above mentioned delineations. In addition, further sub-segmentations of these four categories have to be considered.

Anionic Surfactants

12. Anionic surfactants have a negative charge. The great majority of anionic surfactants is used in household detergent markets (*i.e.* laundry detergents, dishwashing products, household and industrial cleaners, personal cleansing products, *inter alia*). The bulk of anionic surfactants (ca. 90%) are produced through sulfonation and sulfation of the relevant raw materials. Other anionic surfactants, so-called specialty anionics, are produced in a variety of other methods.
13. Sulfonation and sulfation are chemical methods to introduce a “SO₃” group into organic molecules. A sulfation production unit consists of a reactor and a neutralisation unit. For sulfonates, a reactor similar to that for sulfation is needed but no neutralisation unit is required. As a result, producers of sulfates can easily switch to the production of sulfonates, whereas producers of sulfonates have to invest in a neutralisation unit to produce sulfates.
14. BASF claims that this investment is very minor. In addition, BASF states that once a manufacturer has the required know-how and technology to handle the sulfonation and sulfation processes, it can manufacture all anionic surfactants produced by these processes.
15. On the demand-side, BASF considers that there is substitutability between sulfonates and sulfates at least for certain applications. In particular, for laundry detergents or manual dishwashing applications sulfonates and sulfates are considered as substitutable due to the following factors: (i) their prices are similar, and (ii) both products perform the same functions and only require insignificant changes in the formulations.
16. The remaining 10% (‘specialty anionics’) are produced through a variety of other methods, such as carboxylation and phosphatation. BASF considers that these surfactants should be regarded as belonging to separate markets which are distinct from sulfonates and sulfates.

⁵ Case COMP/M.2231 *Huntsman International/Albright&Wilson Surfactants Europe* paras 10-16; M.1517 *Rhodia/Donau Chemie/Albright & Wilson*, paras 33-40.

17. In a previous decision the Commission⁶ considered anionic surfactants used for emulsion polymerization as a separate market, as they have special chemical characteristics, which influence the stability of the emulsion and its activity in polymerization, and cannot therefore be automatically replaced by other anionic surfactants. Also the market investigation in the present case indicated that the different types of anionic surfactants are not interchangeable from a customers' perspective. The vast majority of the respondents considered the various anionic surfactants not as substitutes or at least not close substitutes since they do not have the same technical and chemical properties, their performance differs and prices are different. Only a few competitors stated that sulfates and sulfonates have comparable performances.
18. Concerning supply side substitutability, the overwhelming majority of competitors pointed out that it is difficult to switch production from one anionic surfactant to another, and in particular from the production of commodity anionic surfactants (i.e. sulfates and sulfonates) to specialty anionic surfactants, since chemical processes and equipment required are different and substantial capital investment would be necessary in order to switch production.
19. In conclusion, there are indications that the various categories of anionic surfactants constitute separate product markets. However, the precise delineation of the product market definition for anionic surfactants can be left open as no competition concerns arise under any alternative market definition.

Non-ionic surfactants

20. Non-ionic surfactants are surfactants that have no charge. They are generally less sensitive to hard water than anionics and generate less foam. In many detergent formulations, they are added to complement the properties of anionics and cationics.
21. BASF submits that the bulk of non-ionic surfactants (ca. 90%) are produced through alkoxylation (including ethoxylation) of the relevant raw materials. Alkoxylation refers to the reaction between lower molecular weight alkylene oxides (such as ethylene oxide (EO) or propylene oxide (PO)) and any compound containing one or more active hydrogen atoms in the presence of a catalyst. Based on the categorisation of an independent organisation, a number of potential sub-categories of alkoxyates exist⁷. The activities of the parties overlap in the following CESIO's categories of alkoxyates: (i) alkylphenol ethoxyates, (ii) natural fatty alcohol ethoxyates, (iii) fatty acid ethoxyates, (iii) fatty acid esters, ethoxylated, (iv) fatty amine ethoxyates, (v) alkyl mixed alkoxyates, and (vi) EO/PO copolymers.
22. Concerning demand side substitutability, BASF claims that there is a degree of substitutability between alkoxyates for applications such as in household laundry detergents, automatic dishwashing powders and tablets, and in the area of industrial formulators, such as textile and leather processing, industrial cleaners and for defoamers used in industrial applications.

⁶ Case COMP/M.5358 *Arizona Chemical/Abieta Chemie*.

⁷ Categorisation by CESIO (Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques).

23. Concerning supply-side substitutability, BASF considers that once a manufacturer has the required knowledge and technology to handle ethylene oxide (EO), it is capable of manufacturing any type of non-ionic surfactants produced through alkoxylation.
24. With regard to the non-ionic surfactants that are produced through other processes than alkoxylation (*i.e.* without EO or PO as an input material) BASF considers that these represent separate product markets as these products would not be interchangeable from both demand- and supply side. This includes in particular APG. APGs are sugar-based non-ionic surfactants that are produced by reacting dextrose with an excess of fatty alcohol. BASF submits that its and Cognis' APGs are not substitutable from either demand or supply-side.
25. In the market investigation the vast majority of customers indicated that none of various categories of non-ionic surfactants in which the parties are active constitute substitutes. All of them have different chemical and physical characteristics, different performances and different prices. However, the majority of the competitors stated that the underlying technology requirements are similar for all types of alkoxylates and that thus any producer could, in principle, manufacture any type of non-ionic surfactants produced through alkoxylation.
26. Concerning APG it appears that BASF and Cognis' products belong to different product markets, BASF's APGs are produced through a [...] process that no other APG supplier uses. This specific proprietary process results in a product with very distinct chemistry (*i.e.* different chemical composition, *etc.*) and physical properties (different colour, viscosity, *etc.*). BASF's APG are used [...] applications, whilst the bulk of APGs are used in personal care and home care applications. Also, BASF's APGs are at least [20-30]% more expensive than APGs produced by other suppliers on the market.
27. In the present case there is no need to precisely define the relevant product market/s for non-ionic surfactants as no competition concerns arise under any alternative market definition.

Amphoteric surfactants

28. Only Cognis is active in the production of amphoteric surfactants. These will be dealt with in Section B (Vertical relationships).

1.2 Relevant geographic market

29. BASF considers that the geographic market(s) for surfactants should be considered as worldwide. Trade flows between the different worldwide regions are considered as well-established⁸, there are no regulatory barriers, import duties are minor (ca. 4% of the total price of the product) and cost of transport would be low (ca. [0-10] % of the total price of the product).

⁸ For example, in 2009, imports of non-ionic surfactants into the EEA were estimated by the 2010 SRI study at [80-90] kt, *i.e.* approximately [10-20] % of all EEA sales of non-ionic surfactants and originated to a large extent from the United States.

30. In a previous decision the Commission⁹ considered that the markets for surfactants were EEA-wide due to the following facts: (i) nearly every product was available from several sources regionally, (ii) there was no significant international trade, and (iii) transportation costs were significant. In more recent decisions¹⁰ the scope of the geographic market was left open.
31. In the market investigation in the present case most EEA customers replied that they are supplied from EEA producers. They also stated that have a preference for suppliers with local or national presence, with the exception of non-ionic surfactants, where the preference is not so pronounced. Transport costs appear to be significant in almost all categories of surfactants, ranging from 10 to 20% of the total cost on average. Although, the transport costs are lower for non-ionic surfactants. Imports from outside the EEA are still moderate in all categories. In any event, neither customers nor competitors considered the market smaller than the EEA.
32. For the purposes of the present case it can be left open whether the market is EEA wide or larger, since under any market definition, no competition concerns arise.

1.3 Assessment

Non-ionic Surfactants

33. On a worldwide basis the overall market for non-ionics would not be an affected market, since the parties' combined market shares would be [10-20] %. In addition, the parties face strong competition from other market participants, including: Sasol ([5-10] % worldwide, [10-20] % EEA-wide), Shell ([5-10] % worldwide, [10-20] % EEA-wide), Ineos ([0-5] % worldwide, [5-10] % EEA wide), KLK ([0-5] % worldwide, [5-10] % EEA-wide) and Huntsman ([5-10] % worldwide, [5-10] % EEA-wide). If the market were to be sub-segmented by type of non-ionic surfactant, the parties' combined market share would exceed 15% concerning APG ([60-70] % worldwide).
34. The below table shows the parties' estimated market shares in the EEA for non-ionic surfactants and its further sub-segments in 2009.

⁹ IV/M.1517 - *Rhodia/Donau Chemie/Albright & Wilson*.

¹⁰ Case COMP/5243 - *CVC/RAG/Evonik*, Case COMP/M. 4972 - *Permira/Arysta* and Case COMP/M.4179 - *Huntsman/Ciba TE Business*.

MARKET DATA EEA (2009)										
Product	Total market (kt)	Total market (Mio €)	B sales (kt)	B sales (Mio €)	B vol. shares (%)	B val. shares (%)	C sales (kt)	C sales (Mio €)	C vol. shares (%)	C val. shares (%)
Non-ionic surfactants	[900-1000]	[1200-1400]	[...]	[...]	[10-20]%	[10-20]%	[...]	[...]	[10-20]%	[10-20]%
Allylphenol ethoxylates	[10-20]	[30-40]	[...]	[...]	[0-5] %	[0-5] %	[...]	[...]	[5-10] %	[5-10] %
Alcohol Ethoxylates overall	[600-700]	[800-900]	[...]	[...]	[10-20] %	[10-20] %	[...]	[...]	[10-20] %	[10-20] %
Natural fatty alcohol ethoxyl	[250-300]	[400-500]	[...]	[...]	[0-5] %	[0-5] %	[...]	[...]	[20-30] %	[20-30] %
Synthetic fatty alcohol ethoxyl	[300-350]	[400-500]	[...]	[...]	[30-40] %	[30-40] %	-	-	-	-
Fatty acid ethoxylates	[5-10]	[10-15]	[...]	[...]	[0-5] %	[0-5] %	[...]	[...]	[10-20] %	[10-20] %
Fatty acid esters, ethoxylated	[30-40]	[100-150]	[...]	[...]	[10-20] %	[10-20] %	[...]	[...]	[5-10] %	[0-5] %
Fatty amine ethoxylates	[20-30]	[40-50]	[...]	[...]	[0-5] %	[0-5] %	[...]	[...]	[5-10] %	[5-10] %
Alkyl mixed alkoxyates	[30-40]	[70-80]	[...]	[...]	[40-50] %	[40-50] %	-	-	-	-
EO/PO copolymers	[50-60]	[90-100]	[...]	[...]	[10-20] %	[10-20] %	[...]	[...]	[10-20] %	[10-20] %
APG	[20-30]	[70-80]	[...]	[...]	[0-5] %	[0-5] %	[...]	[...]	[80-90] %	[80-90] %
Alka nalamides	[30-40]	[50-60]	[...]	[...]	[0-5] %	[0-5] %	[...]	[...]	[20-30] %	[20-30] %
Non-ionic surfactants for emulsion polymerization	[30-40]	[80-90]	[...]	[...]	[5-10]	[5-10]	[...]	[...]	[5-10]	[10-20]

Source: Total market size by volume (except for APG, non-ionic surfactants for emulsion polymerization and anionic surfactants for emulsion polymerization): CESIO, increased (where relevant) to reflect estimated sales of surfactants manufacturer Ineos, which does not report to CESIO, and increased by [10-20] % to reflect sales in the 12 EU Member States that are not included in the CESIO data. Total market size by volume for APG, non-ionic surfactants for emulsion polymerization and anionic surfactants for emulsion polymerization: Parties' best estimates (this data is not included in the CESIO statistics). Total market size by value: Parties' best estimates (CESIO does not provide value data).

35. In an overall market including all types of non-ionic surfactants, the parties' combined market shares are below [30-40] % (volume) on an EEA level. The parties will face strong competition from other market participants, including: Sasol ([5-10] % worldwide, [10-20] % EEA-wide), Shell ([5-10] % worldwide, [10-20] % EEA-wide), Ineos ([0-5] % worldwide, [5-10] % EEA-wide), KLK ([0-5] % worldwide, [5-10] % EEA-wide) and Huntsman ([5-10] % worldwide, [5-10] % EEA-wide).
36. In the possible sub-markets, the parties' combined market shares are below [30-40] % in all potential markets (with the exception of APG) both on an EEA and worldwide levels. Due to the moderate market shares and the presence of several significant competitors the transaction will not lead to competition concerns.

37. In the potential submarket for APG the combined market share would be [80-90] %. However, the increment is minimal ([0-5] % in the EEA or [0-5] % worldwide). Also, despite the high market share several competitors are active worldwide and in the EEA in the production and sale of APG. These competitors include Air Liquide through its subsidiary Seppic ([0-5] % worldwide, [5-10] % EEA-wide), Akzo Nobel ([0-5] % worldwide, [5-10] % EEA-wide), Dow ([0-5] % worldwide, [0-5] % EEA-wide), LG Electronics Inc. ([5-10] % worldwide), SFC/RIOC ([0-5] % worldwide) and Diyuan ([0-5] % worldwide).
38. Also, even if the parties' products were to be considered as belonging to the same market for APGs, BASF and Cognis' APGs are not close competitors. BASF's APGs are produced through a [...] process that no other APG supplier uses. This specific proprietary process results in a product with very distinct chemistry (*i.e.* different chemical composition, *etc.*) and physical properties (different colour, viscosity, *etc.*). The market investigation showed that customers do not regard BASF's product and Cognis' product as interchangeable. Whereas BASF's customers use the APG [...] applications, the majority of Cognis' customers use it for personal care products and home care applications. There are also significant price differences of BASF's APG which is ca. [20-30] % more expensive than other APG. Finally, in the market investigation none of the customers or competitors raised competition concerns with respect to APG.
39. In view of (i) the presence of significant competitors in all market segments and the fact that the market shares remain moderate, and (ii) in the case of APG where the market shares are high, given that the parties' products are only distant competitors and since there is only a small increment resulting from the transaction, the Commission considers that the transaction will not lead to competition concerns in the field of non-ionic surfactants resulting from the horizontal relationship.

Anionic Surfactants

40. The below table shows the parties' market shares¹¹ in the market for anionic surfactants and its further sub-segmentations in 2009.

Anionic surfactants	2009 EEA market shares		2009 worldwide market shares	
	BASF	Cognis	BASF	Cognis
Overall Anionics	[0-5] %	[10-20]%	[0-5] %	[10-20] %
Sulfonates	[0-5] %	[0-5] %	[0-5] %	[0-5] %
Sulfates	[0-5] %	[30-40] %	[0-5] %	[20-30] %
Anionics for emulsion polymerization	[0-5] %	[30-40] %	[0-5] %	[20-30]%
Phosphates	[0-5] %	[10-20] %	[0-5] %	[0-5] %
Carboxylates	-		-	

¹¹ Based on the parties' based estimates (in terms of sales).

41. In an overall market for anionic surfactants, the parties' combined market shares are below [10-20] % on both an EEA level and global level. In the potential submarkets the market shares reach ca. [30-40] % for sulfates and ca. [30-40] % for anionics for emulsion polymerisation. However, the increment in these segments is very small. Also, the parties will face competition from other market players, like Stepan, Huntsman, Rhodia, Sasol and Cytec.
42. In the market investigation none of the respondents voiced concerns about the transaction in relation to any anionic surfactant.
43. In view of the moderate market shares under all potential market definitions, the small increment and the fact that several competitors are active in all segments, the Commission considers that the proposed transaction does not raise serious doubts as to its compatibility with the internal market as regards the market for anionic surfactants or any of its further sub-segmentations.

2. Polyalkylene Glycols ("PAG")

44. PAGs are alkoxyates that are produced by reacting ethylene oxide (EO) with short chain non-surfactant alcohols. PAGs are used as high temperature, thermally stable heat transfer fluids exhibiting strong resistance to oxidation, as ingredient in industrial formulations including lubricants, as raw materials for chemical processing as well as ingredient for household products formulated in a solid form. Both BASF and Cognis produce and sell PAG.

2.1 Relevant product market

45. BASF submits that PAGs should be regarded as a separate product market since they are not substitutable with any other product for most applications in which they are used.
46. The Commission has previously considered that PAGs are not substitutable with other lubricant base stocks.¹² In another decision, the Commission examined the question as to whether the transaction in question would raise competition concerns in relation to the vertical relationship between EO and PAGs, without having previously defined a separate market for PAGs.¹³
47. It is not necessary to further delineate the relevant product market for the purpose of this decision no competition concerns arise as a result of the transaction under any market definition.

2.2. Relevant geographic market

48. BASF submits that the relevant geographic market for PAGs should be considered as at least EEA-wide, but can also be considered worldwide. Customers tend to source their requirements for PAGs from throughout the EEA or even from outside the EEA. On the supply-side, the key PAG producers all supply the whole of the EEA and outside the EEA

¹² Case No IV/M.933 - *ICI/Unilever*, Commission decision of 23 June 1997, para. 7.

¹³ Case No COMP/M.4094 - *Ineos/BPDormagen*, Commission decision of 10 August 2006, para. 180.

from a single plant (or very few plants) and apply at least EEA-wide prices as the starting point for negotiations with customers.

49. In previous decisions concerning PAG, the Commission did not define the scope of the geographic market¹⁴. Also for the purposes of the present decision it is not necessary to define the precise scope of the geographic market since under all alternative market definitions, no competition concerns would arise as a result of the transaction.

2.3. Assessment

50. On a global basis the parties would have a combined market shares of [5-10] % (BASF [5-10] % and Cognis [0-5] %) by value and [5-10] % (BASF [5-10] % and Cognis [0-5] %) by volume
51. BASF estimates the EEA market shares as follows:

MARKET DATA EEA (2009)										
Product	Total market (kt)	Total market (Mio €)	B sales (kt)	B sales (Mio €)	B vol. shares (%)	B val. shares (%)	C sales (kt)	C sales (Mio €)	C vol. shares (%)	C val. shares (%)
Polyalkylene Glycols	[200-250]	[300-350]	[...]	[...]	[10-20]%	[10-20]%	[...]	[...]	[0-5]%	[0-5]%

52. BASF estimates the market shares of its EEA competitors as follows: Clariant ([20-30] %), Ineos ([10-20] %), Sasol ([10-20] %) and Dow ([10-20] %).
53. Given the moderate market shares of the parties, the small increment brought about by the transaction and the presence of significant competitors in the market, the Commission considers that the transaction does not lead to competition concerns in this field.

3. Synthetic finished lubricants

3.1. Relevant product market

54. Lubricants are substances used to reduce friction and wear between moving parts. They are normally produced by blending a base oil or stock with chemical additives¹⁵. Depending on the base stock employed, finished lubricants can be divided into mineral and synthetic lubricants. Synthetic lubricants tend to be significantly more expensive than mineral lubricants, due to the higher cost of synthetic base stocks *vis-à-vis* mineral ones, and are employed in applications that require their specific characteristics (range of viscosity and temperature, stability, *etc.*).
55. Lubricants have four main applications. They are used in automotive vehicles (automotive lubricants), ships (marine lubricants) and jet engines (jet lubricants), and for industrial applications (industrial lubricants).

¹⁴ Case No COMP/M.4094 - *Ineos/BPDormagen*, Commission decision of 10 August 2006, para. 180.

¹⁵ In some instances base oils can be sold as lubricants without having been blended with additives.

56. BASF submits that, in accordance with past Commission practice, the market for synthetic lubricants should be subdivided into automotive, industrial, marine and aviation lubricants because substitution between these groups is limited or non-existent, not only on the demand-side but also on the supply-side¹⁶. Formulations for each of the main product types are very specific and involve a significant amount of application-related know-how. In addition, qualification and accreditation¹⁷ requirements vary significantly between applications.
57. The requirement of application-specific know-how is also the reason why many competitors in the lubricant markets are specialized in synthetic lubricants for one application. The parties submit that, given the similarity in know-how required, no further segmentation is required or appropriate, although the segment for synthetic industrial lubricants may be further subdivided into compressor applications, gear applications, refrigerator compressor lubricants and bio-hydraulic fluids.
58. However, there is no need to precisely define the product market in this case as no competition concerns arise under any reasonable market definition.

3.2. Relevant geographic market

59. In past decisions, the Commission considered that the geographic markets for automotive and industrial lubricants were at least national and probably EEA-wide in scope¹⁸.
60. BASF considers that the markets for automotive and industrial lubricants should be regarded as worldwide. Lubricants are produced against international standards and the procurement of lubricants is increasingly becoming international. In addition, automotive and industrial lubricants are easily transported across regions, transports costs are low and there are no major price differences between regions.
61. As regards marine lubricants, BASF concurs with the Commission's view in the above mentioned Commission precedent that the geographic market for marine lubricants is probably worldwide¹⁹. In particular, BASF notes that contracts for international marine are almost always global in nature as they reflect shipping routes and prices are set in US dollars. Moreover, while contract negotiations predominantly take place in Europe, the vessels usually lift the lubricants throughout the world at those locations that meet itinerary, on-board capacity and price requirements.

¹⁶ In COMP/M.5689 - *Bominflot/SBI Holding*, para. 25 and IV/M.1891 - *BP Amoco/Castrol*, para. 10, the Commission has distinguished different product markets for automotive, industrial, marine and aviation lubricants.

¹⁷ In the area of automotive lubricants, standards are set up by bodies such as ACEA, which represents the interests of European manufacturers of cars and trucks. In the area of industrial and marine lubricants the end product is approved either as the result of commercial trials or because it meets a standard product specification whereby the product has the required properties (*e.g.* ISO or DIN). Marine lubricants, which are used to lubricate marine diesel engines of deep draft vessels running on heavy fuel (with high sulphur content), are specially formulated to cope with the extreme conditions encountered in the engines of ocean going vessels. These lubricants also require approvals from Original Equipment Manufacturers (OEMs).

¹⁸ IV/M.1891 - *BP Amoco/Castrol*, para. 18.

¹⁹ IV/M.1891 - *BP Amoco/Castrol*, para. 19.

62. However, there is no need to precisely define the geographic market in this case as competition concerns will not arise on any reasonable geographic market definition.

3.3. Assessment

63. If the EEA were considered as the relevant geographic market for all types of synthetic lubricants, there would be no overlap between the Parties' activities as BASF does not produce or sell synthetic lubricants in the EEA.
64. The following table shows the parties' market shares in the worldwide market for synthetic finished lubricants.

MARKET DATA, Worldwide, 2009											
Product		Total market (kt)	Total market (Mio €)	B sales (kt)	B sales (Mio €)	B vol. shares (%)	B val. shares (%)	C sales (kt)	C sales (Mio €)	C vol. shares (%)	C val. shares (%)
Synthetic industrial lubricants	Compressor applications	[30-40]	[70-80]	[...]	[...]	[0-5] %	[0-5] %	[...]	[...]	[0-5] %	[5-10] %
	Gear applications	[15-20]	[60-70]	[...]	[...]	[0-5] %	[0-5] %	[...]	[...]	[10-20] %	[10-20] %
	Bio hydraulic fluids	[70-80]	[100-150]	[...]	[...]	[0-5] %	[0-5] %	[...]	[...]	[0-5] %	[0-5] %
Synthetic marine lubricants		[0-5]	[10-15]	[...]	[...]	[0-5] %	[0-5] %	-	-	-	-
Synthetic automotive lubricants		[60-70]	[250-300]	-	-	-	-	[...]	[...]	[20-30] %	[20-30] %
All synthetic lubricants		[150-200]	[500-600]	[...]	[...]	[0-5] %	[0-5] %	[...]	[...]	[10-20] %	[10-20] %

65. The parties' activities overlap in the overall market for all synthetic lubricants, the market for synthetic industrial lubricants and its sub-segments for Compressor applications, gear applications and bio-hydraulic fluids. The combined market shares are all below [10-20] % so that BASF/Cognis is unlikely to be able to exert market power. Furthermore, the increment brought by the proposed transaction is minimal (below [0-5] %) and the structure of the market will not be significantly changed by the proposed operation.
66. For these reasons the Commission considers that the proposed transaction does not raise serious doubts as to its compatibility with the internal market regarding the said horizontal overlap.

4. Epoxy systems/Epoxy hardeners

67. Epoxy Systems are chemicals consisting of a resin and a hardener and may also contain additional components such as pigments or solvents. Epoxy systems are used for a variety of applications, industrial tooling, adhesives, coatings, etc.
68. Only BASF sells – to a limited extent - entire epoxy systems (Sales of EUR [...] in 2009); Cognis does not sell entire epoxy systems. Only Cognis is active in epoxy resins with sales of ca. EUR [...] million ([...] tons). Both parties are active in the production and sale of epoxy hardeners. However, BASF considers that the activities do not overlap since Cognis

is active in the production and sale of mercaptanes and small quantities of water based hardeners, markets in which BASF is not active. Cognis considers itself no longer active in the field of amine-based hardeners since it licensed these activities to a third party [...]. This license was initially granted for [...] years and is extendable. BASF's activities in the field of epoxy hardeners relate to amine based hardeners, in particular polyamines.

4.1. Product market

69. BASF submits that amine-based hardeners and mercaptanes are not interchangeable. Mercaptanes cure significantly faster than amines but have a lower adhesion to certain surfaces. As a result, for most applications they will not be considered as substitutable by customers. There is also no substitution on the supply-side because neither raw materials nor technology used for the production of the different types of hardeners are the same.
70. In previous decisions²⁰, the Commission distinguished between amine based hardeners and other types of curing agents. For amine based hardeners further distinctions were considered.
71. It is not necessary to come to a final conclusion on the relevant product market for the purpose of this decision since under all alternative market definitions no competition concerns arise as a result of the proposed transaction.

4.2. Geographic market

72. BASF agrees with the Commission's findings in previous decisions, according to which the geographic scope of the markets for epoxy hardeners are at least EEA-wide.²¹
73. The market definition in the present case points towards a worldwide market. However, it is not necessary to delineate the relevant geographic market for the purpose of this decision, since under both market definitions (EEA and worldwide), no competition concerns arise as a result of the transaction.

4.3 Assessment

74. The potential overlap in the present case is limited to epoxy *hardeners*. BASF estimates the EEA market size for mercaptanes and amine based hardeners together at ca. [100-150] kt and EUR [400-500] million. Within this market, mercaptanes represent only a small portion of ca. EUR [20-30] million worldwide and ca EUR [0-5] million in the EEA.

²⁰ M.4835 *Hexion/Huntsman*, paras 18 and 84; M.3125 *Huntsman/Matlinpatterson/Vantico*, para 17, fn 5.

²¹ Case No COMP/M.4835 - *Hexion/Huntsman*, Commission decision of 30 June 2008, para. 85; Case No COMP/M.3125 - *Huntsman/Matlinpatterson/Vantico*, Commission decision of 19 June 2003, para. 15.

75. BASF estimates the EEA market shares of the parties as follows:

MARKET DATA, EEA-wide, 2009										
Product	Total market (kt)	Total market (Mio €)	BASF sales (kt)	BASF sales (Mio €)	BASF vol. shares (%)	BASF val. shares (%)	Cognis sales (kt)	Cognis sales (Mio €)	Cognis vol. shares (%)	Cognis val. shares (%)
Mercaptanes + amine-based hardeners	[100-150]	[400-500]	[...]	[...]	[5-10]%	[5-10]%	[...]*	[...]*	[0-5]%	[0-5]%
Mercaptanes	[0-5]	[0-5]	-	-	-	-	[...]	[...]	[50-60]%	[50-60]%
Amine-based hardeners	[100-150]	[400-500]	[...]	[...]	[5-10]%	[5-10]%	[...]*	[...]*	[0-5]%	[0-5]%
PAA/AA hardeners	[80-90]	[250-300]	-	-	-	-	[...]*	[...]*	[0-5]%	[0-5]%
Amines + Amine blends	[40-50]	[150-200]	[...]	[...]	[20-30]%	[20-30]%	-	-	-	-

Source: Parties' best internal estimates

* Cognis exited the EU market in March 2010.

76. In a product market comprising both mercaptanes and amine based hardeners the combined market shares remain moderate both on a worldwide basis and in the EEA. Also, several important competitors are active including ICMD and Gabriel Performance Products. For amine based hardeners, BASF submits that Cognis stopped its production in the EEA in March 2010. In any event, for amine-based hardeners the combined market shares remain low post transaction. In the segment of mercaptanes, the proposed transaction will not lead to an overlap of activities since only Cognis is present in the production of mercaptanes. Also the Commission did not find evidence in the market investigation that Cognis' strong position in mercaptanes could be strengthened by combining it with BASF's amine based hardener business.
77. The Commission therefore considers that the transaction does not give rise to competition concerns in this field.

5. Additives for coatings inks and paints

78. Additives are chemical products which are added in small quantities to coatings and printing inks to give the end product specific properties. They are used for coatings, paints, plastics and printing inks for various end applications.
79. Both BASF and Cognis are active in the sale of additives for coatings, inks and paints. The parties' activities in this area overlap with regard to dispersants and wetting agents, defoamers, rheology modifiers and slip/levelling agents.

5.1. Relevant product market

80. BASF considers that additives for coatings, inks and paints should be distinguished from additives for other applications. In addition, and in line with a previous Commission decision²², BASF considers that different product markets may be defined according to the function of the specific type of additive. Thus, dispersants and wetting agents, defoamers, rheology modifiers and slip/levelling agents should be taken as separate product markets. A further sub-division may be appropriate depending upon whether they are water or solvent based²³.
81. It is not necessary to precisely delineate the relevant product market for the purpose of this decision since, under all alternative market definitions, no competition concerns arise as a result of the transaction.

5.2. Relevant geographic market

82. Concerning the geographic scope, BASF submits that the market(s) are at least EEA wide and may be worldwide.
83. The Commission has previously considered the market to be at least EEA-wide.²⁴ For the purposes of the present decision, it is not necessary to precisely delineate the relevant geographic market since under both alternative market definitions (EEA and worldwide), no competition concerns arise as a result of the transaction.

5.3. Assessment

84. BASF estimates the EEA market shares of the parties as follows:

²² M.5243 *CVC/RAG/Evonik*, paras 23-25.

²³ M.5424 *Dow/Rohm and Haas*, para 218-220.

²⁴ Case No COMP/M.5243 - *CVC/RAG/Evonik*, Commission decision of 8 September 2008., para. 58; Case No COMP/M.5424 - *Dow/Rohm and Haas*, Commission decision of 8 January 2009, paras 221-222.

MARKET DATA, EEA (2009)										
Product	Total market (kt)	Total market (Mio €)	BASF sales (kt)	BASF sales (Mio €)	BASF vol. shares (%)	BASF val. shares (%)	Cognis sales (kt)	Cognis sales (Mio €)	Cognis vol. shares (%)	Cognis val. shares (%)
Dispersants and wetting agents	[70-80]	[200-250]	[...]	[...]	[10-20]%	[5-10]%	[...]	[...]	[0-5]%	[0-5]%
Water-based	[40-50]	[100-150]	[...]	[...]	[10-20]%	[10-20]%	[...]	[...]	[0-5]%	[0-5]%
Solvent-based	[20-30]	[100-150]	[...]	[...]	[5-10]%	[5-10]%	[...]	[...]	[0-5]%	[0-5]%
Defoamers	[40-50]	[100-150]	[...]	[...]	[0-5]%	[0-5]%	[...]	[...]	[10-20]%	[5-10]%
Water-based	[40-50]	[100-150]	[...]	[...]	[0-5]%	[0-5]%	[...]	[...]	[10-20]%	[10-20]%
Solvent-based	[0-5]	[10-20]	[...]	[...]	[10-20]%	[5-10]%	[...]	[...]	[5-10]%	[0-5]%
Rheology modifiers	[90-100]	[300-350]	[...]	[...]	[0-5]%	[0-5]%	[...]	[...]	[0-5]%	[0-5]%
Water-based	[70-80]	[200-250]	[...]	[...]	[5-10]%	[0-5]%	[...]	[...]	[0-5]%	[0-5]%
Solvent-based	[20-30]	[100-150]	-	-	-	-	[...]	[...]	[0-5]%	[0-5]%
Slip/levelling agents	[40-50]	[150-200]	[...]	[...]	[5-10]%	[5-10]%	[...]	[...]	[0-5]%	[0-5]%
Water-based	[20-30]	[70-80]	[...]	[...]	[10-20]%	[10-20]%	[...]	[...]	[0-5]%	[0-5]%
Solvent-based	[10-20]	[70-80]	[...]	[...]	[0-5]%	[5-10]%	[...]	[...]	[0-5]%	[0-5]%

Source: Parties' best internal estimates, based on KNG study Global Coating & Ink Additives

85. As the table shows, in all potential segments the combined market shares of the parties are low (the market shares are lower on a global basis). Also, the increment brought about by the transaction in most of the conceivable market definitions is moderate. In all segments several competitors are active. The Commission therefore considers that the transaction will not lead to competition concerns.

6. Hydroxy monomers

86. Both BASF and Cognis produce hydroxy monomers: BASF is active in the production of hydroxy acrylates, *i.e.* hydroxy ethyl acrylate (“HEA”) and hydroxy propyl acrylate (“HPA”), while Cognis produces hydroxy methacrylates, *i.e.* hydroxy ethyl methacrylate (“HEMA”) and hydroxy propyl methacrylate (“HPMA”).

6.1. Relevant product market

87. Hydroxy monomers are chemical products that are mainly used to achieve properties such as hardness, flexibility and durability for automotive OEM and refinish coatings, industrial coatings and adhesives. They are produced by the reaction of acrylic acid or methacrylic acid with EO or PO in the presence of a catalyst, followed by distillation.

88. The Commission has previously identified a single product market for hydroxy monomers²⁵.
89. BASF submits that the market for hydroxy monomers as previously defined by the Commission should be further subdivided into (i) hydroxy methacrylates, which include HEMA and HPMA, and (ii) hydroxy acrylates, which include HEA and HPA – as BASF believes that substitution between the two types of products is limited on both the demand and the supply side.
90. However BASF itself acknowledges that for a substantial part of the applications of hydroxy monomers (in particular coatings) customers can use both types of products and can choose between them at the formulation stage (when the coating is designed).
91. The results of the market investigation have conclusively confirmed that at the formulation stage, hydroxy acrylates and hydroxy methacrylates are to a large extent substitutable for several applications. The customer usually requires a specific performance from the end product (coating) rather than requiring a certain chemical composition. For a majority of applications, this performance can be achieved with both types of hydroxy monomers²⁶.
92. In the light of the above, the Commission considers that, based on the results of the market investigation, it cannot be excluded that the product market covers both types of hydroxy monomers. In view of the substitutability at the formulation stage it appears likely that both types belong to a single product market. However, in view of the remedies submitted by BASF, the precise product market definition can be left open.

6.2 Relevant geographic market

93. The Commission has previously defined the relevant geographic market for hydroxy monomers as EEA-wide²⁷.
94. BASF disagrees with the Commission's previous definition of the relevant geographic market and argue that the relevant geographic market should be defined as worldwide, as, according to BASF, products have equivalent quality irrespective of where in the world they are produced; no specific standards exist in the EEA, the USA or Asia; transport costs are low and transport conditions are easy; significant capacity has been added in Asia since 2001; and no significant price differential exists between different world regions.
95. In the market investigation, several customers pointed out that the European sales of non-EEA producers largely result from product swaps so that in fact only limited amounts of hydroxy monomers are physically imported into the EEA. Moreover, market investigation has revealed that customers of hydroxy monomers still source the overwhelming majority of their requirements from the suppliers located within the EEA. With respect to imports from Asia, there are indications that these imports spiked in 2009 due to lack of demand in Asia

²⁵ Case No COMP/M.2277 - *Degussa/Laporte*, Commission decision of 12 March 2001, paras 15-21.

²⁶ According to the results of the market investigation, there are just a few small niche markets, where only hydroxy acrylates or only hydroxy methacrylates can be used, e.g. fiber optics,

²⁷ Case No COMP/M.2277 - *Degussa/Laporte*, Commission decision of 12 March 2001, paras 32-35.

but have since decreased inter alia due to the increase in the Asian demand, in particular for the automotive industry and the limited availability of the raw material in Asia, leading to decreased capacity of the Asian producers. To the contrary of the Parties' argument, the market investigation indicates that capacity constraints exist in Asia. Also, majority of the customers do not agree with BASF that there would be no substantial price differences between the EEA and Asia.²⁸

96. In view of the results of the market investigation the Commission considers it is likely that the geographic scope of the market is limited to the EEA. However for the purposes of the present decision the geographic market definition can be left open as the remedies proposed by BASF remove the competition concerns.

6.3 Assessment

97. BASF estimates the size of the worldwide market for all hydroxy monomers at about [90-100] kt/EUR [150-200] million and the EEA market at ca. [10-20] kt/EUR [30-40] million. On a worldwide market for all hydroxy monomers, the market shares are estimated at [10-20] % for Cognis and [0-5] % for BASF. Within the EEA, the market shares are estimated at [40-50] % for Cognis and [5-10] % for BASF leading to a combined market share of [50-60]%. In their respective segments, BASF has an estimated EEA market share of [40-50]% for hydroxy acrylates and Cognis has an EEA market share of [50-60]% for hydroxy methacrylates.

Market shares (BASF estimate)

	Hydroxy monomers (Combined)	Hydroxy. acrylates (BASF)	Hydroxy. methacrylates (Cognis)
World	[10-20]%	[5-10]%	[20-30]%
EEA	[50-60]%	[40-50]%	[50-60]%

98. Relatively few competitors are active in this area and the two segments. For the overall market these are Evonik ([20-30] % EEA), Nippon Shokubai ([10-20] % EEA) and Dow ([0-5] % EEA). The market investigation has revealed that a substantial number of customers are concerned about the reduction of the number of EEA producers and they fear that prices will rise as a consequence of the transaction. They point to the fact that post transaction only one other EEA producer of hydroxyl monomers will remain. However the market investigation identified two EEA producers, Evonik and Dow/Rohm. Competitors from outside the EEA included, Nippon Shokubai and Mitsubishi (Japan) Osaka Organic, and Jiangsu Yinyan Speciality Chemicals among other Chinese producers.
99. Given the strong position of the merged entity in the market for hydroxy monomers, the relatively high concentration level of the market, as well as the substantiated customer concerns, the Commission considers that the transaction raises serious doubts as to its compatibility with the internal market in relation to hydroxy monomers in the EEA.

²⁸ Market investigation revealed that difference in prices for hydroxy monomers worldwide varies from 5-30%.

6.4 Commitments submitted by BASF

100. In order to render the concentration compatible with the internal market, BASF has modified the notified concentration by entering into the following commitments, which are annexed to this decision and form an integral part of it.
101. On 9 November 2010, BASF submitted commitments to remove the serious doubts identified by the Commission in the market for hydroxy monomers. BASF proposed to divest Cognis's plant in Hythe, UK, which includes Cognis' entire hydroxy monomers production business.
102. Under the proposed remedy BASF also commits to divest the multifunctional methacrylates and adducts businesses operating on the Hythe site. It will also grant the new owner a licence to produce and sell polyalkylene glycols (PAG) and PAG-based lubricants using Cognis' intellectual property rights and know how. These additional businesses account for substantial parts of the overall activities of the site.
103. Pursuant to BASF's proposal, the sale of the Hythe site is conditional upon the Purchaser entering into a cost-plus toll production agreement for a minimum duration of [...] years for the PAGs and PAG-based lubricants that are presently produced at Hythe. Under the proposed arrangement, BASF would buy in the [...] months all of the production and reduce its off-take subsequently to [...] % over the [...] months. After the [...] months the purchaser would be able to sell PAG and PAG-lubricants on its own account.
104. BASF considers that the proposed divestment eliminates the parties' overlap in hydroxy monomers (with the Hythe site being the only facility where Cognis produces hydroxy methacrylates) and thus is suitable to remove any serious doubts as to the compatibility of the operation with the common market.
105. In addition BASF has entered into related commitments, inter alia regarding the separation of the divested businesses from their retained businesses, the preservation of the viability, marketability and competitiveness of the divested businesses, including the appointment of a monitoring trustee and, if necessary, a divestiture trustee.

Assessment of the proposed remedies

106. The Commission market tested the proposed commitment with competitors and customers in order to evaluate its ability to restore effective competition in the market for hydroxy monomers. The overwhelming majority of the respondents considered that the proposed divestiture would eliminate the serious doubts and that it would constitute a viable business. A number of respondents indicated that would be interested in acquiring the divestment business.
107. In addition to removing the entire overlap in the area of hydroxy monomers, BASF has offered additional elements in order to further increase the viability and attractiveness of the divestment business to potential purchasers. The fact that the whole site will be operated by one operator reduces the complexity of the transfer of the divestment business. Furthermore, BASF will enter into a toll-manufacturing agreement for PAGs and PAG-based lubricants in

order to assist the purchaser of the business with the dilution of fixed costs and will offer the purchaser an irrevocable licence to all relevant IP rights, technology and know-how.

108. Hythe is the largest European producer of hydroxy methacrylates (HEMA and HPMA) with a capacity of approximately [...] tons per year. In 2009, Hythe's hydroxy methacrylates business amounted to EUR [...] million worldwide. It is Europe's second largest European producer of multifunctional methacrylates, with annual capacity of some [...] tons. In 2009, Hythe's multifunctional methacrylates business worldwide turnover amounted to EUR [...]million, the adducts business – to EUR [...]million, the PAG business – EUR [...] million, PAG-based lubricants – EUR [...]million. The projected sales in the Divestment Business (not including PAG and PAG-based lubricants) for 2010 are EUR [...]million (EUR [...]million in 2009).
109. Based on the information provided by BASF and the results of the remedies market test, the proposed divestment business appears to be viable and attractive to prospective purchasers.
110. For the reasons outlined above, the commitments entered into by the undertakings concerned are sufficient to eliminate the serious doubts as to the compatibility of the transaction with the internal market.

8. Fuel additives

111. Fuel additives are chemical substances that are added in small amounts to diesel or gasoline in order to enhance the quality or performance of the fuel.
112. Both parties produce and sell fuel additives but Cognis is only active in the production of [...] individual fuel additive components. Even if each of the components was considered a separate market no competition concerns arise since for each of these products Cognis' product is produced based on the customer's know-how under tolling arrangements. Cognis manufactures the respective additives based on the specifications of these customers, [...] on request of the respective ordering party. Cognis does not sell fuel additives on the merchant market.
113. The Commission therefore considers that the parties' activities do not overlap in this respect. Even if Cognis' toll production for third parties was attributed to Cognis, the transaction would lead under all reasonable market definitions to moderate combined market shares of less than 30% and/or moderate increments. In view of this, the Commission considers that no competition concerns arise in the field of fuel additives.

9. Cosmetic ingredients/Chlorphenesin

114. BASF and Cognis both produce and sell a broad range of cosmetic ingredients. The parties' activities overlap only with regard to surfactants and active ingredients for skin care, which include, among other elements, conditioning polymers and biocides, in particular chlorphenesin.
115. Conditioning polymers are water-soluble polymers used in conditioners, shampoo, hair mousse, hair spray, hair dye, body wash, hair styling and skin care. Biocidal ingredients are used in order to control the growth of microorganisms, which might otherwise have a

negative effect on processes, products and end users. Chlorphenesin is used in both cosmetic applications as a preservative and in pharmaceutical applications as a skeletal muscle relaxant.

9.1. Relevant product market

116. BASF submits that, irrespective of whether all cosmetic ingredients are considered as a single product market or, whether separate markets are defined for individual segments, such as active ingredients for cosmetics, conditioning polymers, biocides or chlorphenesin, the definition of the relevant product market(s) can be left open.
117. In a previous decision, the Commission considered that all cosmetic ingredients belong to a single product market²⁹.
118. In the present case, the market investigation was inconclusive as to whether there is a separate market for chlorphenesin. However, it is not necessary to precisely define the relevant product market for the purpose of this decision, since under all alternative market definitions, no competition concerns arise as a result of the transaction.

9.2. Relevant geographic market

119. The parties consider the geographic market of cosmetic ingredients (including chlorphenesin) to be worldwide.
120. The Commission has previously considered the geographic market for cosmetic ingredients to be at least EEA-wide, if not worldwide.³⁰ The results of the market test in the present case were inconclusive in this respect. However, it is not necessary to delineate the relevant geographic market for the purpose of this decision since under either market definition (EEA and worldwide), no competition concerns arise as a result of the transaction.

9.3. Assessment

121. The parties estimate their market shares (value) as follows:

Product	worldwide			EEA		
	BASF	Cognis	combined	BASF	Cognis	combined
all cosmetic ingredients	[0-5] %	[5-10] %	[10-20]%	[0-5] %	[5-10] %	[10-20]%
active ingredients	[0-5] %	[0-5] %	[5-10] %	[0-5] %	[5-10] %	[5-10] %
biocides	[0-5] %	[0-5] %	[0-5] %	[5-10]%	[0-5] %	[5-10]%
of which chlorphenesin	[40-50]%	[30-40]%	[70-80] %	[5-10]%	[10-20]%	[10-20]%
conditioning polymers	[0-5] %	[0-5] %	[0-5] %	[0-5] %	[0-5] %	[0-5] %

²⁹ M.2926 *EQT/H&R/Dragoco*, paras 29-30.

³⁰ Case No COMP/M.2926 - *EQT/H&R/Dragoco*, Commission decision of 16 September 2002, paras 33-38.

122. The market shares and increments of all conceivable market definitions are moderate except for chlorphenesin should the relevant geographic market be defined as worldwide. Within the EEA market shares are moderate.
123. For chlorphenesin, BASF estimates the size of the worldwide market at ca [0-5] kt/EUR [5-10] million and the size of the EEA market at [0-5] kt/EUR [0-5] million. Based on the information provided by BASF, there do not seem to be other important competitors but several smaller companies with market shares of about [0-5] % worldwide or [5-10]% in the EEA (such as Jan Dekker, Orient Stars LLC, Arch, Grant Industries and Kraeber).
124. Further investigation has revealed that the chlorphenesin used in pharmaceutical applications has the same chemistry and the same quality as the chlorphenesin used in cosmetic applications. Also the price of chlorphenesin for both applications appears to be the same. While approval procedures are required for chlorphenesin that is sold for pharmaceutical applications, no such approval is required for chlorphenesin for cosmetic applications. It thus appears that any chlorphenesin that is available on the market for pharmaceutical applications can be sold for cosmetic applications. There are numerous players that supply chlorphenesin for pharmaceutical applications.
125. The Commission therefore considers that the chlorphenesin available for pharmaceutical application exerts considerable competitive pressure on chlorphenesin for cosmetic ingredients.
126. The Commission therefore considers that the transaction does not lead to competitive concerns in this field.

10. Vitamine E

127. Vitamin E refers to a category of fat-soluble compounds called tocopherols and tocotrienols. Vitamin E functions as an antioxidant that helps to resist damages to cells and tissues by stabilizing cell membrane. It is used in a variety of applications: in nutrition (human and animal) as well as in cosmetics and in the pharmaceutical industry. Vitamin E can either be extracted from natural resources or be chemically synthesized.
128. Both BASF and Cognis produce vitamin E. However, while Cognis is active in the production and sale of natural vitamin E, BASF is active in the production and sale of synthetic vitamin E.

10.1 Relevant product market

129. BASF considers that there are separate product markets for natural vitamin E on the one hand and for synthetic vitamin E on the other because of different uses (food applications and cosmetics as opposed to animal feed applications), price differences and different production processes. Prices for natural vitamin E exceed prices for synthetic vitamin E significantly. As a result, synthetic vitamin E is purchased predominantly by the feed industry, where natural vitamin E is not used (apart from very small specialty and premium pet food applications), the remainder being consumed by the food industry, and to a limited

although increasing extent ([0-5] % according to the parties' estimate) by the cosmetics industry.

130. Natural vitamin E is primarily used in food applications (dietary supplements), and to a lesser extent in “natural” cosmetics. Even in applications where natural and synthetic vitamin E are, in principle, substitutable from the demand-side, in fact they are not interchangeable due to the price differences. In applications such as dietary supplements in human nutrition (e.g. softgel capsules) and cosmetics, for which both types of vitamin E are generally suitable, the purchaser's choice is either driven by price considerations, in which case he will opt for synthetic vitamin E, or by health/branding considerations (“natural” brand), in which case he will opt for natural vitamin E regardless of the higher price. As for multi-vitamin blends, the use of natural vitamin E would not be taken into consideration by a reasonable producer if the vitamin E were to be blended with other vitamins that are not derived from natural sources. The price difference could in this case not be compensated by a credible health claim that would permit to pass on the higher price on the downstream market for multivitamins.
131. In *CVC/PAI Europe/Provimi*, where the Commission examined several vitamins, including vitamin E, used for animal feed purposes, the market investigation generally indicated that each vitamin constitutes a separate product market. However the Commission left the precise market definition open.³¹
132. The market investigation tends to confirm BASF' arguments and their view that natural vitamin E and synthetic vitamin E are not in the same product market. However, for the purposes of the present decision there is no need to decide on the product market definition as in any event the transaction will not lead to a significant impediment to effective competition.

10.2 Relevant geographic market

133. In *CVC/PAI Europe/Provimi*, the Commission considered that the geographic markets for vitamins are worldwide, but left the precise definition open³².
134. According to the notifying party the relevant geographic markets for synthetic vitamin E and for natural vitamin E are worldwide in scope. BASF produces synthetic vitamin E in[...]. Cognis produces natural vitamin E in[...]. The notifying party submits that there are no trade barriers with regard to either natural vitamin E or synthetic vitamin E.
135. For BASF, price differences, if any, are caused by regional supply or demand imbalances. For Cognis, vitamin E is priced globally and pricing may vary between [0-10] % between the different world regions. The results of the market investigation were inconclusive in this respect. Several companies pointed out a price difference between the EEA and the rest of the world.

³¹ Case No COMP/M.2956 - *CVC/PAIEurope/Provimi*, Commission decision of 28 October 2002.

³² Case No COMP/M.2956 - *CVC/PAIEurope/Provimi*, Commission decision of 28 October 2002, para. 21.

136. The results of the market investigation confirm that there are no significant limitations to a worldwide scope. Companies source Vitamin E at worldwide level as there is a reduced number of sourcing sites. Vitamin E is easily packaged and transported to customers located worldwide. Synthetic vitamin E is exported to all countries.
137. In view of the above results, it is not necessary to delineate the relevant geographic market for the purpose of this decision *since* under either market definition (EEA and worldwide), no competition concerns arise as a result of the transaction.

10.3. Assessment

138. The parties estimate their market shares (by volume) as follows:

Product	Worldwide			EEA		
	BASF	Cognis	combined	BASF	Cognis	combined
all vitamin E	[20-30]%	[0-5]%	[20-30]%	[20-30]%	[0-5] %	[20-30] %
synthetic	[20-30] %	0	[20-30] %	[20-30] %	0	[20-30] %
natural	0	[30-40]%	[30-40]%	0	[10-20]%	[10-20]%

139. If there are separate relevant product markets for natural and synthetic vitamin E BASF and Cognis are not active in the same markets.
140. BASF and Cognis only have very few customers for vitamin E in common accounting for less than [10-20] % of their sales. BASF shares less than [10-20] % of its vitamin E customers with Cognis. This is likely due to the fact that the different types of vitamin E are used in different applications and that customers do not consider the products interchangeable. In any event, the market shares in a combined market as well as in the different segments remain moderate with several significant competitors like Zhejiang, ADM, Bluestar / Adisseo, DSM Nutritional Products, Eisai and Vitaecaps being active in all segments. The Commission therefore considers that no competition concerns arise from the transaction in this field.

11. Beta carotene

141. Beta-carotene is a provitamin A that is converted into vitamin A when ingested by the living organism. Beta-carotene is, in large part, used in food applications (dietary supplement and food coloring), in particular beverages. Animal nutrition accounts for a smaller part of the uses for betacarotene. There are two types of beta-carotene: natural and synthetic. Synthetic beta-carotene accounts for approximately 90% of the overall beta-carotene production.
142. Both BASF and Cognis produce beta-carotene. However, while Cognis is active in the production and sale of natural beta-carotene, BASF is active in the production and sale of synthetic beta-carotene.

11.1 Relevant product market

143. BASF submits that natural and synthetic Beta-carotene form separate markets due to price differences and different production processes. From a demand-side perspective, there is

little substitutability between synthetic and natural beta-carotene. On average, natural beta-carotene is priced approximately [0-5] times the price of synthetic beta-carotene. The majority of natural beta-carotene is purchased for use as dietary supplement (up market health food) as a natural source of vitamin A, and to a lesser extent for food colouring (i.e. technical additive).

144. Synthetic beta-carotene is predominantly sold to the food food/beverage industry as a colorant and as ingredient in dietary supplements, as a source of vitamin A and as an ingredient in the animal feed and pet food market. Thus, even though both synthetic and natural beta-carotene are sold as dietary supplements and colorants, there is only very limited substitutability given the significant price difference. As customers' choices are often driven by either price, marketing strategies ("natural" brand) or health considerations, they will opt for synthetic or for natural beta-carotene depending on the specific end use, without considering the use of the other type of beta-carotene. In addition, in some applications such as food colouring natural and synthetic beta-carotene cannot be substituted directly due to different properties (e.g. different colouring).
145. The majority of respondents to the market investigation confirm BASF's view and arguments concerning the product market definition. However, for the purposes of the present decision there is no need to decide on the product market definition as in any event the transaction will not lead to a significant impediment to effective competition.

11.2. Relevant geographic market

146. The Commission considered in a previous decision that the market for beta-carotene is at least EEA-wide admitting, however, that there were several indications pointing to a worldwide market³³.
147. According to the notifying party the markets for both synthetic and natural beta-carotene are worldwide in scope as there are no trade barriers for beta-carotene. Beta-carotene is easily packaged and transported over long distances.
148. Cognis produces in and exports natural beta-carotene from[...]. BASF produces synthetic beta-carotene in [...], from where it also serves customers located in all world regions.
149. The results of the market investigation were inconclusive in this respect. In fact, several companies pointed to price differences between the EEA and the rest of the world.
150. The market investigation has revealed that most companies (both customers and competitors) source the majority of their betacarotene requirements at a worldwide level. Moreover, distribution of betacarotene is organised on a worldwide basis for most of both customers and competitors, as main suppliers are spread worldwide.

³³ Case No COMP/E-1/37.512 - V, Commission decision of 21 November 2001, para. 69.

151. However, it is not necessary to delineate the relevant geographic market for the purpose of this decision since under either market definition (EEA and worldwide), no competition concerns arise as a result of the transaction.

11.3 Assessment

152. BASF estimates the parties' market shares (by volume) as follows:

Product	worldwide			EEA		
	BASF	Cognis	combined	BASF	Cognis	combined
all beta-carotene	[20-30] %	[0-5] %	[20-30] %	[20-30] %	[0-5] %	[20-30] %
synthetic	[20-30] %	0	[20-30] %	[20-30] %	0	[20-30] %
natural	0%	[40-50] %	[40-50] %	0	[40-50] %	[40-50] %

153. BASF and Cognis are not active on the same markets, if separate markets are defined for synthetic and natural beta-carotene.

154. Cognis and BASF only share very few customers (less than [5-10] % of all beta carotene customers accounting for less than [10-20] % of sales). BASF considers that even those customers to which they both sell would use the product for different applications, some applications always using natural and some always using synthetic beta-carotene. Three out of four customers replying to the Commission's investigation said that natural and synthetic beta-carotene are separate product markets because the prices and production processes are different.

155. The Commission considers that on a combined market for all beta carotene the proposed concentration will not lead to competition concerns due to the moderate market shares and the small increment resulting from the transaction. Also, several competitors such as DSM, Vitatene and Christian Hansen will remain active on the market. In the potential segments the parties' activities do not overlap so that the transaction would not cause an impediment to effective competition. In any event, in both segments several strong competitors remain active post transaction. The Commission therefore considers that no competition concerns arise from the transaction in this field.

B. Vertical relationships

156. 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).

157. Concerning the remaining markets, in many instances the market shares do not reach 25% on the up- or downstream level under any plausible market definition. For those markets the Commission considers that no competition concern will arise. These relationships concern: 1) detergent range alcohols (upstream), non-ionic surfactants (downstream), 2) PEO (upstream) – PAG (downstream), 3) TMP and Isonnonanionic acid (upstream) – Esters for synthetic lubricants (downstream), 4) 2-Pyrrikudibe (upstream) – cosmetic ingredients (downstream), 5) PUFA oil (upstream) - PUFA powders (downstream), 6) Sodium hydroxide and Sodium carbonate (upstream) with various applications.
158. The remaining relationships are described in more detail in the following paragraphs.

1. Fixed bed catalysts (upstream) – natural alcohols (downstream)

159. Both parties produce fixed bed catalysts which are used in the production of natural fatty alcohols.

1.1. Fixed bed catalysts

1.1.1. Relevant Product market

160. A catalyst is a reagent that promotes a chemical reaction even if it is not consumed by the reaction itself. There exist multiple types of catalysts with different chemical compositions and applications (*e.g.* catalysts used for refining, polymerization, petrochemicals or oleochemicals). Catalysts are typically used in either fixed-bed or slurry processes. The fixed-bed process uses a static catalyst bed (in the form of a tablet or extrudate) with a continuous flow of feedstock over the catalyst. Products and part of the catalyst are continuously withdrawn from the reactor and the catalyst is removed via filtration. Natural fatty alcohols are produced using both fixed-bed and slurry processes. Fixed bed catalysts are not suitable for use in slurry processes and *vice versa*.
161. BASF considers that fixed-bed catalysts used in the production of natural fatty alcohols constitute a separate product market. From the demand-side, catalysts for this application cannot be substituted by catalysts for slurry phase due to the technical differences between the processes described above. Also, from the supply-side fixed bed catalysts are sufficiently different from slurry catalysts so that suppliers could not produce both catalyst types using the same assets. Slurry catalysts are supplied as powder, whereas fixed-bed catalysts are supplied as extrudates or tablets having different characteristics.
162. The Commission has previously considered whether catalysts should be grouped according to their application³⁴. In another decision³⁵, the Commission's market investigation confirmed BASF's view that there exist separate markets for catalysts on the basis of the application of the catalyst. Similarly, in another case³⁶, it resulted from the replies to the market investigation that "*the catalyst has to be designed to produce the*

34 COMP/M. 4102 - *BASF/Engelhard*, para. 8.

35 COMP/M.3125 - *Huntsman/Matlinpatterson/Vantico*, para. 14.

36 COMP/M.4927 - *Carlyle/Ineos/JV*, para. 33.

specified product in a given production facility". In all these cases the Commission ultimately left the market definition open.

163. However, the precise product market definition can be left open in this case as under any delineation there would be no competition concerns.

1.1.2. Relevant geographic market

164. BASF considers that a potential market for fixed-bed catalysts for natural fatty alcohols should also be regarded as worldwide in scope. BASF argues that it produces fixed-bed catalysts in the USA and supplies to the customers on a worldwide basis.
165. In previous decisions³⁷, the Commission's market investigation indicated that the markets for the catalysts at issue are worldwide. However, the precise market definition was ultimately left open.
166. In any event, the definition of the relevant geographic market can be left open as there would be no competition concerns irrespective of the precise geographic scope of the catalyst market.

1.2. Alcohols

167. BASF and Cognis are active in the production of alcohols but focus on different parts of this product segment. In general, BASF only produces and sells synthetic alcohols, while Cognis is only active in the production and sale of natural alcohols.

1.2.1. Relevant product market

168. BASF considers that alcohols should be grouped depending on their chain length since alcohols with different chain-lengths are used in different applications and can therefore not be regarded as substitutable by customers. The groups proposed by BASF are as follows:
- **Alcohols with a chain length below C6.** This group includes primarily monohydric alcohols such as C1 (methanol) and C2 (ethanol), which are used as intermediates for the production of methyl- and ethyl esters and as solvents, C3 (n-propanol, iso-propanol), used as solvents, diluents or disinfectants, and C4 (n-butanol, iso-butanol) and C5 (pentanols), used as solvents and process additives.
 - **Alcohols with a chain length between C6 and C11** may be synthetic or natural alcohols with one hydroxyl group. Alcohols with a chain length between C6 and C11 can be produced from natural (vegetable oils) or from synthetic sources. For alcohols with a chain length between C6 and C11, natural and synthetic alcohols cannot be regarded as substitutable due to their different chemical structure and application. Natural alcohols are linear alcohols (also referred to as unbranched), which are used mainly in personal care,

³⁷ COMP/M.4927 - *Carlyle/Ineos/JV*, paras 40-41; COMP/M.3125 - *Huntsman/Matlinpatterson/Vantico*, para. 15.

due to their thick jelly like consistency and the fact that these alcohols are produced from natural oils (mainly coconut or palm oil). Synthetic alcohols are branched alcohols, used mainly as intermediates in the production of plasticizers, lubricants, solvents and other technical products and have different characteristics from the natural alcohols (except for one process (Ziegler process) able to produce synthetic linear C6, C8 and C10 alcohols with the same characteristics as natural alcohols).

- **Alcohols with a chain length between C12 and C18** and one hydroxyl group are so-called **detergent-range alcohols** and are used in making surfactants, which are further used in detergents and cosmetics, but also for technical applications.
- **Alcohols with a chain length above C18** are primarily used in paper defoaming.

169. BASF considers that in some cases it may be appropriate to further distinguish alcohols based on their origin, *i.e.* natural (palm, palm kernel or coconut oil based) or synthetic.

170. The Commission has not previously assessed an overall market for alcohols but rather looked at specific alcohols. In a previous case³⁸ the Commission has assessed detergent-range alcohols and left open whether oxo-alcohols (type of a synthetic alcohol) and linear fatty alcohols and their derivatives (linear fatty alcohols in the C12-C18 range) belong in the same market open.

171. For the purposes of this case, it is not necessary to decide on the precise product scope of the alcohols market, since no competition concerns arise under any alternative market definition.

1.2.2. Relevant geographic market

172. BASF submits that the markets for all types of alcohols are global in scope. There are significant imports into the EEA, accounting for approximately 15% of the EEA demand. Also, alcohols could be easily transported across the world and transport costs are relatively low (approximately [0-10] %). There are no regulatory or customs barriers to trade. All alcohols sold worldwide comply with the same standards. BASF considers that there are also no major price differences between regions.

173. In a prior decision³⁹ the Commission indicated that the market for oxo-alcohols (a type of synthetic alcohol) was at least EEA-wide, but ultimately left the definition of the relevant geographic market open.

174. The Commission considers that the precise market definition can be left open in the present case as no competition concerns arise under any plausible market definition

³⁸ Case No. IV/M.612 – *RWE-DEA/Augusta*.

³⁹ COMP Case No. IV/M.612 – *RWE-DEA/Augusta*.

1.3 Assessment

175. BASF submits the following market shares for fixed bed catalysts and for natural alcohols:

Market Shares, Worldwide						
Product	B + C vol. shares (%)	B + C val. shares (%)	B vol. shares (%)	B val. Shares (%)	C vol. shares (%)	C val. shares (%)
Fix-bed catalysts for natural alcohols	[20-30] %	N/A	[10-20] %	N/A	[5-10] %	N/A
Natural and Ziegler alcohols with chain length of C6-C11	[5-10] %	[5-10] %	-	-	[5-10] %	[5-10] %
Alcohols with chain length of C12-C18	[0-5] %	[0-5] %	[0-5] %	[0-5] %	[0-5] %	[0-5] %
Natural alcohols with chain length of C12-C18	[5-10] %	[5-10] %	-	-	[5-10] %	[5-10] %

Market Shares, EEA						
Product	B + C vol. shares (%)	B + C val. shares (%)	B vol. shares (%)	B val. Shares (%)	C vol. shares (%)	C val. shares (%)
Fix-bed catalysts for natural alcohols	[60-70] %	N/A	[60-70] %	N/A	-	-
Natural and Ziegler alcohols with chain length of C6-C11	[10-20] %	[10-20] %	-	-	[10-20] %	[10-20] %
Alcohols with chain length of C12-C18	[5-10] %	[5-10] %	[0-5] %	[0-5] %	[5-10] %	[5-10] %
Natural alcohols with chain length of C12-C18	[10-20] %	[10-20] %	-	-	[10-20] %	[10-20] %

176. Fixed bed catalysts represent only a small part of the production costs of natural alcohols (less than [0-5] %). Therefore, input foreclosure by raising rivals cost appears unlikely. According to the parties, [0-5] % of fixed bed catalysts are used for producing natural alcohols. In addition, worldwide and within the EEA several competitors for fixed bed catalysts are active, such as Südchemie, Davy Process Technologies and Nikki Japan. In view of this, the Commission considers that the proposed concentration will not lead to a significant impediment to effective competition resulting from input foreclosure in this field.

177. If the geographic market is considered to be the EEA it seems likely that if BASF were to foreclose or significantly raise competitors' prices, these competitors would be able to source catalysts from the rest of the world where over 90% of catalyst sales are made.

178. The Commission further considers that the transaction will not lead to customer foreclosure. The parties' market shares in the downstream market are small and do not reach 15%. In addition, Cognis purchases already today [90-100] % of its needs from BASF so that the transaction will not cause any change of the present market situation.

179. In view of this, the Commission considers that no impediment to effective competition will result from the proposed transaction coming from the vertical relationship of fixed bed catalysts and natural alcohols.

2. Detergent range alcohols (upstream) - Non-ionic Surfactants (downstream)

180. Both BASF and Cognis are active in the production of alcohols including detergent range alcohols which are used for the production of non-ionic surfactants.

2.1 Detergent range alcohols (chain length between C12 and C18)

181. The product and geographic market for alcohols have been described above in paragraphs 167-174 Detergent range alcohols have a chain length between C12 and C18.

2.2. Non-ionic surfactants

182. Non-ionic surfactants are described above in paragraph 20.

2.3. Assessment

183. Cognis' (natural) detergent range alcohols can be used for the production of BASF's non-ionic surfactants. However, there is no (potential) vertical relationship between BASF's (synthetic) alcohols and Cognis' surfactants as Cognis only produces surfactants based on natural alcohols. Therefore, the vertical relationship at issue is limited to *natural* alcohols used for the production of non-ionic surfactants.

184. BASF submits the following market shares for (natural) alcohols and non-ionic surfactants:

Market Shares, EEA (2009)						
Product	B + C vol. shares (%)	B + C val. shares (%)	B vol. shares (%)	B val. Shares (%)	C vol. shares (%)	C val. shares (%)
Alcohols with chain-length of C12-C18 (detergent range alcohols)	[5-10] %	[5-10] %	[0-5] %	[0-5] %	[5-10] %	[5-10] %
Natural Detergent-range alcohols						
Natural alcohol blends (C12-C18)	[10-20] %	[10-20] %	-	-	[10-20] %	[10-20] %
Non-ionic surfactants						
Natural fatty alcohol ethoxylates	[20-30] %	[20-30] %	[0-5] %	[0-5] %	[20-30] %	[20-30] %
Alkyl mixed alkoxyates	[40-50] %	[40-50] %	[40-50] %	[40-50] %	-	-
APG	[80-90] %	[80-90] %	[0-5] %	[0-5] %	[80-90] %	[80-90] %
Non-ionic surfactants for emulsion polymerization	[10-20] %	[10-20] %	[5-10] %	[5-10] %	[5-10] %	[10-20] %

Source: Parties' best estimates and CESIO data.

185. The Commission considers that *input foreclosure* is unlikely since the parties' market share for the potential product market of natural detergent range alcohols is low ([10-20] % should the geographic market be EEA or [5-10] % worldwide). The low market share implies that there is ample opportunity for non-ionic surfactants producers to source natural alcohols from other sources. On the wider upstream product market, all detergent-range alcohols (synthetic and natural), input foreclosure concerns do not arise as Cognis' market shares are even lower ([0-5] % of the worldwide market and [5-10] % of the market in the EEA).
186. The Commission further considers that *customer foreclosure* is unlikely, even if the market for the downstream products were to be defined separately for alkyl mixed alkoxyates⁴⁰ (where BASF has an estimated [40-50] % market share in the EEA) or for APG (market share of [80-90] % in the EEA). The amount of detergent-range alcohols purchased by BASF for the production of all non-ionic surfactants, including the segment of alkyl mixed alkoxyates and APG, accounts for only [0-5] % of the total European demand for detergent-range alcohols. Subtracting the quantities of natural alcohols already supplied by Cognis to BASF, the share of demand that might shift from other suppliers of natural alcohols to Cognis post-merger is [0-5] % of the total European demand. The transaction will therefore not deprive Cognis' competitors of an outlet crucial for their ability to compete on the market for detergent-range alcohols.
187. In addition, alkyl mixed alkoxyates and APG only represent a small part of the production of non-ionic surfactants [0-5] % and [0-5] % respectively. Consequently they account for less than [0-5] % of the production of natural alcohols. Therefore natural alcohol producers would be capable of finding other customers should the combined entity internalise the input.
188. Given the lack of market power at the upstream product level and the fact that the demand of the combined entity for detergent-range alcohols is relatively small the Commission considers that the proposed transaction does not raise serious doubts as to its compatibility with the internal market in the vertically affected market of detergent-range alcohols and non-ionic surfactants.

3. Ethylene Oxide-(upstream) – Non-ionic surfactants (downstream)

189. BASF produces ethylene oxide (“EO”) which is an input for non-ionic surfactants. Both parties are active in the production of non-ionic surfactants.

3.1. Ethylene Oxide-(upstream)

3.1.1. Relevant product market

190. EO is a colourless gas, which is produced by the partial oxidation of ethylene that is fed into a reactor system with oxygen over a fixed bed silver-based catalyst. EO has an ethylene content of 82% and is a hazardous product, being highly flammable and

⁴⁰ This is an unlikely outcome, since the results of market investigation indicate that the most plausible market definition is that all alkoxyates belong to the same product market.

explosive as well as being toxic and carcinogenic. EO is either mixed with water to produce a mixed glycols stream (ethylene glycols) or further purified for the production of other EO derivatives (Purified Ethylene Oxide, “PEO”). Most of PEO is used captively for the production of EO derivatives (ethanolamines, glycol ethers and alkoxyates), the remainder being sold to third parties, either to customers located on the same or an adjacent site or to off-site customers. A very small part may also be used to produce glycols.

191. BASF considers that the relevant product market should be defined as that for EO (or more precisely PEO as this is the product sold on the merchant market), without any further distinction.
192. In past decisions⁴¹, the Commission considered that EO constitutes a separate market as it is characterised by low substitutability, especially when used as a direct raw material in chemical reactions.
193. In *Ineos/BP Dormagen*⁴², the Commission left open the question as to whether onsite supplies (*i.e.* long-term arrangements with customers whose derivative plants for conversion of EO are located on, or adjacent to, the EO supplier’s site and connected *via* pipeline) and off-site supplies (*i.e.* supplies to other customers involving transport) constituted two separate markets.
194. However, the precise product market definition can be left open in the present case in the absence of competition concerns.

3.1.2. Relevant geographic market

195. BASF considers that the market is EEA wide. BASF submits that crude EO is produced in Europe in several countries, mainly in Belgium, the Netherlands and Germany. All these plants belong to chemical companies with an integrated downstream production into PEO derivatives. Most of the EO producers also manufacture downstream products such as amines, ethoxyates, *etc.* and use most of their production captively. Companies not integrated into EO buy PEO from the market, normally *via* long term supply agreements ([...] years and longer). PEO is supplied mainly *via* RTCs⁴³ (Rail Tank Cars) and *via* pipeline in rare cases (*e.g.*[...]). In countries where no or insufficient amounts of PEO are produced (*e.g.* Italy, UK) customers import PEO (Italy for example has imported [...] kt of PEO in 2010 until September according to PCI mainly from Germany). Costs of transport/logistics account for around [0-10] % of costs, depending on the location and mode of transport used.

41 COMP/M.4005 - *Ineos/Innovene*, paragraph 15.

42 COMP/M.4094 - *Ineos/BP Dormagen*, paragraph 46.

43 According to the Cefic guidelines, RTCs are the preferred mode of transport and only in the case of missing railway connections will the shortest possible distance then be transported by road tank (multimodal transport rail-truck).

196. In previous decisions⁴⁴ the Commission left open the question whether the EO market should be regarded as Western Europe (*i.e.* EEA and Switzerland) or regional, in view, in particular, of the fact that transport of EO is relatively costly and difficult due to the product's hazardous characteristics and price variations across regions. The regional markets considered are: (i) United Kingdom and Ireland, (ii) Nordic countries, (iii) Mainland North-West Europe ('MNWE'), (iv) the Mediterranean basin and (v) Central and Eastern Europe.

197. In any event, the precise geographic market definition can be left open in the present case in the absence of competition concerns.

3.2. Non-ionic surfactants

198. Non-ionic surfactants have been described in paras 20-27 and 29-32 above.

3.3. Assessment

199. The following table shows BASF's market shares in the upstream market for off-site PEO. BASF does not have any on-site sales of PEO. On-site supply is made by pipeline to plants on the same site or the site adjacent to the producer of PEO. Off-site deliveries are usually made by train or road tanker.

Region	Total market merchant sales		BASF's merchant sales			
	Volume (kt)	Value (million EUR)	Volume (kt)	Value (million EUR)	Market share by volume in %	Market share by value in %
Worldwide	[1500-1700]	[1300-1500]	[...]	[...]	[0-5] %	[0-5] %
EEA total	[600-700]	[600-700]	[...]	[...]	[0-5] %	[0-5] %
UK and Ireland	[100-150]	[100-150]	0	0	0%	0%
Nordic Countries	[5-10]	[5-10]	0	0	0%	0%
Mainland North-West Europe	[250-300]	[250-300]	[...]	[...]	[0-5] %	[0-5] %
Mediterranean Basin	[200-250]	[200-250]	0	0	0%	0%
Central and Eastern Europe	[100-150]	[100-150]	0	0	0%	0%

200. The following table shows parties' market shares in the downstream market for non-ionic surfactants.

⁴⁴ COMP/M.4094 - *Ineos/BP Dormagen*, paragraph 47-51.

MARKET SHARES, EEA (2009)						
Product	BASF + Cognis volume (%)	BASF + Cognis value (%)	BASF volume (%)	BASF value(%)	Cognis volume (%)	Cognis value(%)
Non-ionic surfactants	[20-30] %	[20-30]%	[10-20] %	[10-20] %	[10-20] %	[10-20] %

Input foreclosure

201. EO is an important input for non-ionic surfactants and accounts for more than [40-50] % of the costs. However, with a market share of less than [0-5] % under any possible product and geographic market delineation in PEO, the combined entity lacks market power upstream. Therefore, Cognis' rivals in non-ionic surfactants have alternative sources of supply for PEO, *i.e.* Clariant, Ineos, Sasol, Dow and Shell. In view of this, the Commission considers that the proposed transaction will not lead to input foreclosure/price increases for PEO.

Customer foreclosure

202. Non-ionic surfactants are an important application of PEO. More than [50-60] % of the PEO are used in the production of non-ionic surfactants. However, with combined market shares below [20-30] % in the EEA the merged entity will not have sufficient market power to successfully foreclose access to customers. Also, it appears likely that the combined entity will continue to purchase PEO from other suppliers. Cognis' demand for PEO will be reduced following the divestiture of the hydroxy monomers business at Hythe. BASF's current merchant sales would not be sufficient to supply all of Cognis' requirements for PEO [...] kt in the EEA as BASF's global merchant sales were only [...] kt in 2009.

203. As a result, both input and customer foreclosure seem unlikely as a result of the vertical relationship between PEO upstream and non-ionic surfactants downstream. For these reasons the Commission considers that the proposed transaction does not raise serious doubts as to its compatibility with the internal market resulting from this vertical relationship.

4. EO-(upstream) –Hydroxy methacrylates (downstream)

204. BASF produces EO which is used for the production of hydroxy methacrylates. Cognis is active in the production of hydroxy methacrylates, which are a segment of hydroxy monomers.

205. Ethylene Oxide-EO is described above in paragraphs 190-194.

206. Hydroxy methacrylates are described, as being a part of hydroxy monomers, in paragraph 91.

207. The following table shows Cognis' market shares in the downstream market segment for hydroxy methacrylates.

MARKET SHARES, EEA (2009)						
Product	BASF + Cognis volume (%)	BASF + Cognis value (%)	BASF volume (%)	BASF value(%)	Cognis volume (%)	Cognis value(%)
Hydroxy methacrylates	[50-60] %	[50-60] %	-	-	[50-60] %	[50-60] %

Input foreclosure

208. With a market share of less than [0-5] % for EO under all plausible product and geographic market definitions, the combined entity would lack market power on the upstream market. There are alternative suppliers for PEO, e.g. Clariant, Ineos, Sasol, Dow and Shell. Also, only about [0-5] % of the PEO is used in the production of hydroxy methacrylates and there are no indications that BASF could discriminate different users of PEO. In view of this, input foreclosure, including price rise due to the proposed transaction, is unlikely.

Customer foreclosure

209. Based on its production capacities, BASF is capable of supplying all of Cognis' PEO requirements; however, this represents only [10-20] % of EEA merchant demand and this would require BASF to operate at 100% of capacity and resolve the transport problems. BASF currently only delivers by rail whereas Cognis is supplied by road tanker. In any case, the parties have submitted a proposal to divest Cognis' plant in Hythe (the UK) which manufactures all of Cognis' hydroxy methacrylates. This remedy will remove the vertical relationship at issue.
210. As a result, both input and customer foreclosure can be excluded and the vertical relationship will no longer exist. For these reasons the Commission considers that the proposed transaction does not raise serious doubts as to its compatibility with the internal market concerning PEO and hydroxy methacrylates.

5. AEEA (upstream) – Amphoteric surfactants (downstream)

211. BASF produces Aminoethylethanolamine (AEEA) which is used as an input for amphoteric surfactants, a segment in which Cognis is active.

5.1 AEEA

5.1.1. Relevant product market

212. The upstream product of Aminoethylethanolamine (AEEA) is a commodity chemical intermediate product, which is derived from ethylene. Its primary and secondary amine groups together with the hydroxy group combine the features of an ethyleneamine and an ethanolamine. AEEA is used for various applications, including epoxy hardeners, fuel additives, chelating agents, surfactants and fabric softeners among others.

213. BASF submits that AEEA forms a single product market that is separate from the markets for other ethyleneamines basing its reasoning on the homogeneous nature of the chemical product, different uses compared to other ethyleneamines, difficulty in reformulation and testing and the limits of supply-side substitutability among the producers of different ethyleneamines.
214. The Commission has previously examined ethyleneamines⁴⁵ and concluded that both from a demand and from the supply side, each ethyleneamine including AEEA constitutes a separate product market. This position has been confirmed by the results of the market investigation in the present case. However, the precise product market definition can be left open in the present case in the absence of competition concerns on the narrowest market, that for AEEA.

5.1.2. Relevant geographic market

215. In line with the previous Commission decisions⁴⁶, BASF submits that the geographic market for AEEA is worldwide. The four producers of AEEA ([...]) are supplying the entire world from their respective single production plant without any other production sites. Two of the plants are located in the US, one in Sweden and one in Belgium.
216. In addition, BASF submits that substantial amounts of products are imported and exported from and to the EEA. Also, transportation costs do not play a significant role and there are no significant safety or other restrictions to transportation other than the standard regulations for the transportation of chemicals.
217. The Commission's market investigation confirmed that there is no preference on the customer side for a supplier with a local presence. Moreover, results of the market investigation indicate that there are no material differences with regard to customers' requirements or the regulatory regimes between different world regions⁴⁷.
218. However, the precise geographic market definition can be left open in the present case in the absence of competition concerns regardless of whether the market is worldwide or EEA in scope.

5.2. Amphoteric surfactants

219. Only Cognis is active in the production of amphoteric surfactants.

5.2.1. Relevant product market

220. Amphoteric surfactants have a charge that is either positive or negative, depending on the pH of the solution. Amphoteric surfactants are generally characterized by their relative

⁴⁵ COMP/M.1671 - *Dow Chemical/Union Carbide*, Commission decision of 3 May 2000, paras 149-159; COMP/M. 4179 - *Huntsman/Ciba TE Business*, Commission decision of 30 June 2006, paras 12-15.

⁴⁶ Case COMP/M.1671 - *Dow Chemical/Union Carbide*, Commission decision of 3 May 2000, paras 160-163; Case No COMP/M. 4179 - *Huntsman/Ciba TE Business*, Commission decision of 30 June 2006, paras 42.

⁴⁷ The respondents of the market investigation unanimously submitted that the requirements of AEEA customers throughout the world regions do not vary.

mildness. They also tend to be stable and effective over a broader pH range than most anionic surfactants. They are used in laundry detergents, dishwashing products, household and industrial cleaners (oil field), personal care products and industrial applications such as textile and leather treatment and as metal ion scavengers and antistatic agents.

221. BASF considers that all types of amphoteric surfactants belong to a single product market. This is based on supply side considerations as all types of amphoteric surfactants (betaines which represents ca. 90% of all amphoterics as well as other types such as acetates, glycinates, imidazolines etc) and are produced using basically the same process.
222. The majority of the competitors replying to the Commission's market investigation confirm that producers could switch from the production of betaines to the production of other amphoteric surfactants. However, switching costs would be involved, as well as time would be required (from 6 months to 1 year to switch from one product group to another, on average). The customers considered that not all amphoteric surfactants are interchangeable, or at least not interchangeable for all applications. In fact, as the majority stated, amphoteric surfactants are different from a chemical, physical, safety, price and performance point of view.
223. In any event, the question whether all amphoteric surfactants belong to the same product market, or whether each type of amphoteric surfactants has to be regarded as a different market can be left open, given that no competition concerns arise under any plausible market definition.

5.2.2. Relevant geographic market

224. As for all types of surfactants (see paras 29-32 above) BASF considers that the geographic scope of the market is worldwide, due to substantial trade flows, lack of regulatory barriers and low cost of transport.
225. However, the precise geographic market definition can be left open in the present case in the absence of competition concerns whether the market is worldwide or EEA in scope.

5.3. Assessment

226. BASF submits the following market share estimates for AEEA and amphoteric surfactants:

MARKET DATA, Worldwide (2009)										
Product	Total market (kt)	Total market (Mio €)	B sales (kt)	B sales (Mio€)	B vol. shares (%)	B val. shares (%)	C sales (kt)	C sales (Mio €)	C vol. shares (%)	C val. shares (%)
AEEA	[20-30]	[40-50]	[...]	[...]	[10-20] %	[10-20] %	-	-	-	-
Amphoteric surfactants	[400-500]	[1200-1400]	-	-	-	-	[...]	[...]	[5-10] %	[5-10] %

Source: Parties' best internal estimates. Total worldwide market size for amphoteric surfactants based on 2010 SRI study.

MARKET DATA, EEA (2009)										
Product	Total market (kt)	Total market (Mio €)	B sales (kt)	B sales (Mio€)	B vol. shares (%)	B val. shares (%)	C sales (kt)	C sales (Mio €)	C vol. shares (%)	C val. shares (%)
AEEA	[0-5]	[10-20]	[...]	[...]	[30-40] %	[30-40] %	-	-	-	-
Amphoteric surfactants	[90-100]	[200-250]	-	-	-	-	[...]	[...]	[10-20] %	[10-20] %

Source: Parties' best internal estimates - Market shares for surfactants based on CESIO data and Parties' best internal estimates

227. Based on a worldwide scope of the AEEA market, the concentration does not lead to any affected market. However, even on an EEA basis BASF's market share only exceeds to some extent exceeds 30% a level below which it is unlikely that a company has the ability to foreclose. Also, on all levels several significant competitors are active. These competitors include for AEEA - AKZO (with a market share of [40-50] % in the EEA and [20-30] % worldwide), Dow (with a market share of [5-10] % in the EEA and [20-30] % worldwide) and Hunstman (with a market share of [5-10] % in the EEA and [30-40] % worldwide) and for amphoteric surfactants Evonik ([20-30] % in the EEA and 5-10 % worldwide), Rhodia/Feixiang (10-20% in the EEA and 5-10% worldwide), Zschimmer & Schwarz (10-20% in the EEA and below [5-10] % worldwide) and Stepan, Hunstman and Kao with market shares below [5-10] % at both EEA and worldwide level.
228. Based on these considerations, the Commission finds that input or customer foreclosure can be excluded in the vertical relationship of AEEA and amphoteric surfactants. Therefore, no significant impediment of effective competition will arise in this context.

6. DMAPA (upstream) – Amphoteric surfactants (downstream)

229. BASF produces dimethylaminopropylamine (“DMAPA”) which is an input of Cognis’ amphoteric surfactants.

6.1. DMAPA

6.1.1. Relevant product market

230. DMAPA is a colourless liquid used as an intermediate commodity chemical in the manufacture of, inter alia, surfactants. DMAPA is a homogenous product. There are no distinctions by product grade, quality or end use application. BASF estimates that at least [70-80] % of its DMAPA sales in the EEA were for use in the production of amphoteric surfactants in 2009.

231. In previous decisions the Commission considered DMAPA as potential separate product market but ultimately left the precise market definition open⁴⁸. In a more recent decision⁴⁹ the Commission considered that DMAPA constitutes a separate product market.

232. In the present case, BASF considers that, in line with the Commission precedent, the relevant product market should be defined as that for DMAPA, because there do not appear to be any direct substitutes for the product on either the demand or the supply-side.

233. The market investigation fully confirmed this view. The majority of respondents considered that (i) DMAPA is a separate market, (ii) DMAPA has no competing products, and (iii) all manufacturers produce DMAPA with similar characteristics, and thus, DMAPA is a homogenous product for which there is no significant differentiation by product grade, quality or end use application. Additionally, the majority of the customers responded that DMAPA is a crucial input for amphoteric surfactants and, in particular, for betaines.

234. In light of the above, and for the purposes of this decision, the Commission considers that DMAPA is a separate relevant product market.

6.1.2. Relevant geographic markets

235. In previous decisions, the Commission regarded the market for DMAPA as at least EEA-wide, in view of: (i) the lack of regulatory and customs barriers, (ii) the low level of transport costs, and (iii) the absence (or very limited presence) of price differentials based on the location of customers⁵⁰.

236. BASF considers that the geographic market should be regarded as worldwide. DMAPA producers either have a single production plant ([...]) or two production plants worldwide

48 Case No COMP/M.2231 - *Huntsman International /Albright & Wilson Surfactants Europe*, Case No COMP/M.3125 - *Huntsman/Matlinpatterson/Vantico*.

49 Case No COMP/M.5243 *CVC/RAG/Evonik*.

50 Case No COMP/M.5243 - *CVC/RAG/Evonik*, Case No COMP/M.3125 - *Huntsman/Matlinpatterson/Vantico*.

([...]; [...]). BASF estimates that imports into the EEA amounted to approximately [...]t, or [0-5] % of the EEA demand in 2009 (in 2008: [...] t or [0-5] % of EEA demand; in 2007: [...] t or [0-5] % of EEA demand). Exports from the EEA to other world regions are significant, amounting to approximately [...] kt or [10-20] % of European DMAPA production in 2009 (in 2008: [...] kt or [20-30] % of European DMAPA production).

237. Most of the competitors responding to the Commission's market investigation stated that the vast majority of DMAPA supplied within the EEA comes from European suppliers. In fact, a number of respondents stressed the fact that European capacities are sufficient to meet the demand, thus imports from outside the EEA do not play a significant role. On the other hand, the majority of customers stated that they have suppliers outside the EEA, and more specifically, from China.

238. The geographic scope for DMAPA is likely to be at least EEA wide. However, for the purposes of the present decision, the precise definition of the relevant geographic market can be left open since the proposed transaction does not give rise to any competition concerns under any alternative market definition.

6.2. Amphoteric surfactants

239. The product and geographic markets for amphoteric surfactants are described in paras. 220-225 above.

6.3. Assessment

240. The following tables show the parties' market shares in the markets for DMAPA (upstream) and amphoteric surfactants (downstream) on an EEA and worldwide level in 2009:

MARKET DATA, Worldwide (2009)										
Product	Total market (kt)	Total market (Mio €)	B sales (kt)	B sales (Mio€)	B vol. shares (%)	B val. shares (%)	C sales (kt)	C sales (Mio €)	C vol. shares (%)	C val. shares (%)
DMAPA	[70-80]	[100-150]	[...]	[...]	[50-60] %	[50-60] %	-	-	-	-
Amphoteric surfactants	[400-500]	[1200-1400]	-	-	-	-	[...]	[...]	[5-10] %	[5-10] %

Source: Parties' best internal estimates. Total worldwide market size for amphoteric surfactants based on 2010 SRI study (attached as Annex 7.3.2 Surfactant Market studies).

MARKET DATA, EEA (2009)										
Product	Total market (kt)	Total market (Mio €)	B sales (kt)	B sales (Mio€)	B vol. shares (%)	B val. shares (%)	C sales (kt)	C sales (Mio €)	C vol. shares (%)	C val. shares (%)
DMAPA	[30-40]	[40-50]	[...]	[...]	[40-50]%	[40-50]%	-	-	-	-
Amphoteric surfactants	[90-100]	[200-250]	-	-	-	-	[...]	[...]	[10-20] %	[10-20] %

Source: Parties' best internal estimates - Market shares for surfactants based on CESIO data and Parties' best internal estimates

241. Only BASF is active in the production of DMAPA, while Cognis is a manufacturer of amphoteric surfactants.

Input foreclosure

242. DMAPA is an essential input for the production of amphoteric surfactants, and in particular for betaines, which constitute the bulk of the amphoteric surfactants (i.e. 90% of the amphoteric surfactants are betaines).

243. Regardless of the geographic scope of the market, BASF has a strong presence in the upstream market for DMAPA, with a market share of [50-60] % worldwide and [40-50] % in the EEA. Cognis' presence downstream is moderate, with only [5-10] % market share worldwide and [10-20] % in the EEA. If betaines were to be considered as a separate relevant market, Cognis' market share would continue to be moderate ([20-30] % in the EEA).

244. Following the transaction, BASF will continue to face competition from a number of significant competitors both in the EEA and worldwide in the upstream market for DMAPA. In fact, as shown below, two strong players are active in this market: Huntsman and Taminco.

Supplier	Europe	Worldwide
BASF	[40-50] %	[40-50] %-
Huntsman	[30-40] %	[10-20] %
Taminco	[10-20] %	[10-20] %
Feixang	[0-5] %	[10-20] %
Air Products	-	[0-5] %
Others	-	[0-5] %

Source: BASF estimates

245. BASF claims that no input foreclosure concerns arise given the relatively small presence of Cognis on the downstream market, and the presence of important players on the upstream and downstream markets. BASF also claims that for some applications, such as

certain type of personal care products, the downstream manufacturers can substitute betaines by other amphoteric surfactants that are not based on DMAPA (notably, amphotoacetates and cocobetaine) or by certain non-ionic surfactants, leading to end-products with only slightly different characteristics. BASF considers that these substitutes constitute a competitive constraint on the DMAPA market.

246. In the market investigation a number of DMAPA customers/amphoteric surfactants producers expressed concerns about potential input foreclosure and price increases post merger. A majority of customers emphasized the bargaining power of DMAPA producers.
247. The Commission considers that the high market shares in the upstream market could give BASF the ability to engage in input foreclosure practices including price increases. However, it has to be noted that a number of significant competitors will remain active on the market and that those competitors seem capable of frustrating any attempt of BASF to increase prices for DMAPA in order to increase their own market shares. In any event, the Commission has come to the conclusion that BASF does not have incentives to raise prices at the risk of losing market share for DMAPA.
248. BASF's margins for DMAPA (as a percentage of net sales⁵¹) are higher than those of Cognis' for betaines. Based on the figures provided by the parties the DMAPA contribution margin excluding fixed costs varied [by 10-50] % in the period 2007-2009. While Cognis' margins for betaines⁵², on the same basis, during the last three years were in the range of [0-30] %, and thus, significantly lower than those of DMAPA. As a consequence, it would not be economically reasonable to reduce sales in the upstream market, since the profitability in the downstream product is lower and BASF would lose money by following this strategy.
249. It should be taken into account, however, that Cognis already purchases [50-60] % of its worldwide DMAPA needs from BASF and operates at a high capacity utilisation rate ([80-90] %). Even if all of Cognis' needs of DMAPA for the production of betaines were shifted to BASF, Cognis' purchases of DMAPA would account for only [10-20] % of BASF's total capacity.
250. Hence, over [80-90] % of BASF's DMAPA production would have to be sold into the merchant market. Alternatively, the combined entity could increase its betaines production to use the remaining [80-90] % of BASF DMAPA capacity. If this were the case, the merged entity would need to use [significantly] more DMAPA than it is currently using. For that purpose, it would need to increase its production of amphoteric and build new betaine plants to use the available DMAPA.
251. Cognis estimates that a new greenfield production plant for [5000-10000] tonnes of betaines a year of betaines in Europe would cost approximately EUR [...] million. To absorb the DMAPA currently consumed by Cognis's competitors the combined entity would have to invest [10-20] of such plants.

51 After deduction of variable costs and allocated fixed costs from net sales to third parties.

52 Calculated as 'Net Total Sales - Mark up - Commissions - Transport - Material Costs - Processing Costs', but not deducting fixed costs

252. Thus, the investment required in order to use all of the available DMAPA to produce betaines would be extremely high. The lower margins achieved by betaines would not justify a decision to build (a) new production plant(s) for betaines, given the investments required.
253. Also, given the significant free DMAPA capacity (capacity utilisation in the EEA and globally is less than [70-80] %) in the market and considering the strength of Cognis' betaine competitors, it is unlikely that the combined entity could realistically gain significant market share in the downstream market for betaines.
254. In light of the above, the Commission considers that it is unlikely that the transaction leads to input foreclosure since there are no incentives to increase prices for DMAPA at the risk of losing market shares to competitors. Also, the relatively low market shares of Cognis in the downstream market, the existence of strong players on both levels and the significant investments required by the merged entity for the expansion of betaines' production downstream indicate that input foreclosure is unlikely.

Customer foreclosure

255. Cognis' market shares in the downstream market of amphoteric surfactants and the potential submarkets are below 20% both in the EEA and globally. There are significant large competitors: Evonik (5-10% worldwide, [20-30] % EEA-wide), Rhodia/Feixiang (5-10% worldwide, 10-20% EEA-wide), Zschimmer & Schwarz ([5-10] % worldwide, 10-20% EEA-wide), Stepan ([5-10] % worldwide and EEA-wide), Huntsman ([5-10] % worldwide and EEA-wide) and Kao ([5-10] % worldwide and EEA-wide). BASF's sales are very concentrated and focused on [0-5] main clients which account for about [60-70] % of its EEA sales (one of which represent [40-50] % of BASF's total sales).
256. In addition, Cognis is to a large extent supplied by BASF. In 2009 Cognis purchased [50-60] % of its worldwide DMAPA and [30-40] % of its European DMAPA needs from BASF
257. Cognis' needs for DMAPA account for only [10-20] % of the European DMAPA demand and much lower shares on a worldwide basis. Subtracting the DMAPA quantities already supplied by BASF to Cognis, the share of demand that might shift from other DMAPA competitors to BASF as a consequence of the transaction is only approximately [10-20] % of total European DMAPA demand. This indicates that the transaction will not deprive BASF's DMAPA competitors of a customer that is crucial for the competitors' presence and ability and incentive to compete on the DMAPA market. Moreover, with an EEA market share of [20-30] % under the narrowest possible market definition, Cognis lacks market power downstream. Therefore, the transaction will not cause customer foreclosure concerns.
258. In light of the above, the Commission considers that the proposed transaction does not raise serious doubts as to its compatibility with the internal market as regards the vertical link of DMAPA (upstream) and amphoteric surfactants (downstream), or in any of its further sub-segmentations.

7. Surfactants for emulsion polymerisation (upstream) – Latices (downstream)

259. Both parties are active in the production of surfactants for emulsion polymerisation which are inputs for the latices BASF produces. Cognis does not produce latices.

7.1. Anionic and Non-ionic Surfactants for emulsion polymerisation (upstream)

260. Both anionic and non-ionic surfactants can be used for emulsion polymerisation. Anionic surfactants for emulsion polymerization are defined in paragraph 17 above. Non-ionic surfactants for emulsion polymerisation are defined in paragraph 24.

7.2. Latices

7.2.1. Relevant product market

261. Latex dispersions (or latices) are used as a binder in various applications including paper and carpet manufacturing and the production of non-woven textiles. Depending on the basic monomers used, there are different types of latices. The main latices produced by the parties from surfactants are carboxylated styrene butadiene (XSB), styrene acrylate (SA) and all-acrylics (AA) latices. There are also other types including vinyl-based, hollow sphere or polystyrene based latices.

262. The Commission has previously defined product markets according to the type of latex dispersion (i.e. chemical composition) and also by its application.⁵³

263. In line with the previous Commission decisions BASF considers that the product markets relevant for the notified merger are: XSB latices and SA latices, both used for paper applications, and AA latices used for non-woven applications.

264. The market investigation has indicated that the segmentation according to the type of dispersion, as well as by application, is most commonly used within the latex industry and among its customers. It has also been confirmed that there are essential differences between the three types of latices in terms of water resistance, durability, cost/performance ratio, etc. However, the market investigation has also demonstrated that XSB and SA latices for paper applications are, to a certain extent, substitutable from a demand side perspective. Concerning the supply side, producers indicated that they are able to switch from producing a given type of latex to another, and, in particular, between SA and AA latices⁵⁴.

265. In the light of the above the Commission has based its assessment on XSB latices and SA latices, both used for paper applications, and AA latices used for non-woven applications as potential separate product markets.

⁵³ See COMP/M.1993 – *Rhodia/Raisio/JV*, Commission decision of 20 July 2000, para. 20; COMP/M.5355 - *BASF/CIBA*, Commission Decision of 12 March 2009, para 165.

⁵⁴ This finding is also in line with the findings in previous Commission decisions. See COMP/M.5355 - *BASF/CIBA*, Commission Decision of 12 March 2009, para 176.

7.2.2. Relevant geographic market

266. In line with the Commission precedents⁵⁵, the notifying party submits that the market for latices should be defined as EEA-wide.
267. The market investigation indicates that latices' producers are supplying on an EEA wide basis. Also prices and market conditions appear to be similar throughout the EEA.
268. In view of the above and for the purposes of the present case the Commission has based its assessment on a EEA wide market since for the assessment of the vertical relationship the sourcing of the latices producers is relevant rather than the supply of latices to latices customers.

7.3. Assessment

269. BASF submits the following market shares for surfactants for emulsion polymerisation and for the different types of latices.

⁵⁵ Case No, COMP/M.5355 - *BASF/CIBA*, Commission Decision of 12 March 2009, para 172; COMP/M.1467 - *Rohm&Haas/Morton*, COMP/M. 1097 - *Wacker/Air Products*, COMP/M.751 - *Bayer/Huls*.

Market Shares, EEA (2009)						
Product	B + C vol. shares (%)	B + C val. shares (%)	B vol. shares (%)	B val. Shares (%)	C vol. shares (%)	C val. shares (%)
Anionic Surfactant	[10-20]%	[10-20]%	[0-5]%	[0-5]%	[10-20]%	[10-20]%
Anionic surfactant for emulsion polymerisation	[30-40]%	[30-40]%	[0-5]%	[0-5]%	[30-40]%	[30-40]%
Non-ionic surfactant	[20-30]%	[30-40]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%
Non-ionic surfactant for emulsion polymerisation	[10-20]%	[10-20]%	[5-10]%	[5-10]%	[5-10]%	[10-20]%
XSB latices for paper	[30-40]%	[30-40]%	[30-40]%	[30-40]%	-	-
SA latices for paper	[60-70]%	[60-70]%	[60-70]%	[60-70]%	-	-
AA latices for non-woven	[10-20]%	[10-20]%	[10-20]%	[10-20]%	-	-

Source: Worldwide - parties' best estimates. EEA - Parties' best internal estimates – Market shares for surfactants based on CESIO data and Parties' best internal estimates

270. The market shares of the main competitors in the potential upstream market of anionic and non-ionic surfactants for emulsion polymerisation, as provided by the parties are as follow:

Company	EEA Market shares 2009 anionic by vol.	EEA Market shares 2009 non-ionic by vol
Stepan	10-25%	-
Huntsman	10-25%	10-25%
Sasol	10-25%	10-25%
Cytec	5-10%	-
AKZO	-	10-25%
Clariant	-	25-40%

Source: Parties' best estimates. According to the parties it is difficult to determine their sales of anionic surfactants for emulsion polymerisation, as they often do not know for what purposes their customers use the anionic surfactant. The volume figures in the table indicate the volume of active substance sold. The amount of active substance differs from product to product and therefore can only be estimated.

Input foreclosure

271. In the upstream surfactants' markets the parties' market shares slightly exceed [30-40] % in the EEA and a number of significant competitors are active (see table above).

272. The market investigation at the downstream level confirmed that there are no anionic or non-ionic surfactants for emulsion polymerisation produced by Cognis for which there are no viable alternative suppliers. Therefore, even if Cognis were to restrict downstream competitors' access to anionic and non-ionic surfactants for emulsion polymerisation post-transaction, such a foreclosure strategy would not be effective given the presence of alternative suppliers. This is further supported by the fact that pursuant to the results of the market investigation, a vast majority of competitors of the parties in the downstream markets for SA and XSB latices for paper applications seek dual or multi-sources for their requirements of anionic and non-ionic surfactants for emulsion polymerisation.
273. In view of the moderate market shares and the presence of the competitors the Commission considers input foreclosure unlikely.

Customer foreclosure

274. The market shares for latices are high in the field of SA latices for paper and [are 30-40] % for XSB latices for paper. In the field of AA latices for non-woven the market shares do not reach 15% in the EEA. In all segments several important competitors are active such as for SA latices for paper: Dow ([20-30] %) and CH Polymers ([10-20] %); for XSB latices for paper: Dow ([40-50] %) and Polymer Latex ([10-20] %) are the most important competitors. Surfactants for emulsion polymerisation account for less than [0-5] % of the merchant sales of both non-ionic and anionic surfactants. The percentage of surfactants used for latices would not exceed [0-5] % even if all the surfactants for emulsion polymerisation were used for latices. Therefore, producers of the relevant surfactant would still find alternative customers for their product.
275. In addition, BASF already buys a significant proportion of its needs of anionic surfactants for emulsion polymerisation for the latices production from Cognis so that in this respect, the transaction will not cause any structural change in the market. It does not buy any non-ionic surfactants for emulsion polymerisation from Cognis. However, in any event BASF accounts for less than [5-10] % of the European demand for anionic surfactants for emulsion polymerisation (EUR [...] million out of EUR [80-90] million) and less than [0-5] % of European demand for non-ionic surfactants for emulsion polymerisation (EUR [...] out of EUR [80-90] million). Subtracting the quantities of anionic surfactants for emulsion polymerisation already supplied by Cognis to BASF, the share of demand that might shift from other suppliers of anionic surfactants for emulsion polymerisation to Cognis as a consequence of the merger is negligible (less than [0-5] %) of total European demand.
276. Based on this, the Commission considers that customer foreclosure is unlikely in this vertical relationship.
277. In the light of the above, the Commission considers that the proposed transaction does not raise serious doubts as to its compatibility with the internal market in the vertically affected hypothetical markets of anionic and non-ionic surfactants for emulsion polymerisation and XSB and SA latices for paper applications.

7. Esters for synthetic lubricants (upstream) – Finished synthetic lubricants (downstream)

278. BASF produces esters which can be used for Cognis finished synthetic lubricants.

7.1. Esters for synthetic lubricants

7.1.1. Relevant product market

279. Esters are chemical compounds composed of an acid part and an alcohol part. Most commonly they are manufactured directly by condensation of acid and alcohol. Esters can be found virtually everywhere. Many naturally occurring fats and oils are the fatty acid esters of glycerol. Esters with low molecular weight are commonly used as fragrances and found in essential oils and pheromones. Esters can also be used for a very wide variety of applications. The main demand for esters in volume terms is for use as a PVC plasticizer, as reactive acrylic esters and for biodiesel. Another use for esters is as base stocks for high performance lubricants (mainly automotive and aviation but also industrial, e.g. for refrigeration and textile finishing). There are many different types of esters, named generally with reference to the parent alcohol and the carboxylic acid.
280. In a previous case, the Commission indicated that an esterification plants (a type of batch autoclave) can be configured to produce a variety of types of esters in differing proportions⁵⁶. From the demand-side, the Commission noted that esters have many and varied uses, which tend to be specific to the type of ester. It ended up examining a narrower sub-segment of the esters market, that of short-chain polyol esters (SCPEs)⁵⁷.
281. In other cases, the Commission looked at very specific types of esters defined by acid and alcohol used although very often it was not necessary to take a definitive decision on the relevant product market. Thus, in COMP/M.5355 - *BASF/CIBA*⁵⁸, the Commission confirmed its prior decision⁵⁹ and indicated that various types of acrylate esters constitute separate relevant markets. In the mentioned decision, the Commission had already stated that butyl acrylate and 2-ethylhexyl acrylate esters belong to separate product markets. Similarly, the Commission defined separate product markets for each type of acrylic ester⁶⁰. Whether diacetyl tartaric esters of monoglycerides constitute a separate market was left open by the Commission.⁶¹
282. Generally, the Parties agree with the Commission's past approach to look at each type of ester in isolation because in many instances the use of a particular alcohol and acid will influence the characteristics of the resulting ester in a way that renders demand-side substitution difficult. There are also applications where customers may and regularly do substitute different types of esters, or even products other than esters, for one another. This applies, for example to some extent with respect to esters used in cosmetics or in synthetic

56 IV/M.933 - *ICI/Unilever*, para. 7.

57 IV/M.933 - *ICI/Unilever*, paras 7-11.

58 para. 299.

59 COMP/M.3056 - *Celanese/Degussa/JV*, paras 178 and 181.

60 COMP/M.5424 - *Dow/Rohm and Haas*, para. 33.

61 COMP/M.5109 - *Danisco/Abitec*, para. 26.

lubricants, both of which are made by Cognis. BASF submits that supply-side substitution is possible for certain types of esters, as is the case with respect to Cognis' esters, but in connection with BASF's esters, it is excluded or at least economically uninteresting for many other types.

283. However, in the present case, the exact product market definition can be left open in the absence of competition concerns.

7.1.2. Relevant Geographic market

284. Concerning the scope of the geographic market BASF considers that the market for esters including those for synthetic lubricants is at least EEA wide. This is in line with previous Commission decisions where the Commission considered the various markets for esters analysed to be at least EEA-wide⁶². However, for the purposes of the present case it is not necessary to decide on the precise scope of the geographic market as no competition concerns will arise under any plausible geographic market definition.

7.2. Finished synthetic lubricants

285. Finished synthetic lubricants have been described in paras 54-62 above.

7.3. Assessment

286. The following tables show the parties' estimated market shares in the upstream market for esters for synthetic lubricants and the downstream market for finished synthetic lubricants, both EEA and worldwide.

MARKET DATA, Worldwide (2009)										
Product	Total market (kt)	Total market (Mio €)	BASF sales (kt)	BASF sales Mio€	BASF vol. share (%)	BASF val. share (%)	Cognis sales (kt)	Cognis sales Mio €	Cognis vol. share (%)	Cognis val. share (%)
Esters for synthetic lubricants	[300-350]	[600-700]	[...]	[...]	[0-5]%	[0-5]%	[...]	[...]	[5-10]%	[5-10]%
Synthetic automotive lubricants	[60-70]	[250-300]	-	-	-	-	[...]	[...]	[20-30]%	[20-30]%
Synthetic industrial lubricants	[100-150]	[200-250]	[...]	[...]	[0-5]%	[0-5]%	[...]	[...]	[0-5]%	[5-10]%
Synthetic marine lubricants	[0-5]	[10-15]	[...]	[...]	[0-5]%	[0-5]%	-	-	-	-

⁶² IV/M.933 - ICI/Unilever, para. 15 and COMP/M.4972 - Permira/Arysta, para. 23.

MARKET DATA, EEA (2009)										
Product	Total market (kt)	Total market (Mio €)	BASF sales (kt)	BASF sales Mio€	BASF vol. share (%)	BASF val. share (%)	Cognis sales (kt)	Cognis sales Mio €	Cognis vol. share (%)	Cognis val. share(%)
Esters for synthetic lubricants	[100-150]	[200-250]	[...]	[...]	[0-5]%	[0-5]%	[...]	[...]	[5-10]%	[5-10]%
Synthetic automotive lubricants	[20-30]	[80-90]	-	-	-	-	[...]	[...]	[0-5]%	[5-10]%
Synthetic industrial lubricants	[40-50]	[100-150]	-	-	-	-	[...]	[...]	[0-5]%	[0-5]%
Synthetic marine lubricants	[0-5]	N/A	-	-	-	-	-	-	-	-

Input foreclosure

287. The market shares at the upstream level for esters for synthetic lubricants are small and [are 5-10] % either on a worldwide basis or in the EEA. The relatively low market shares imply that there are other competitors so that the combined entity will lack the ability to engage in any input foreclosure strategy including price rises. On the basis of this, the Commission considers that the proposed transaction will not lead to input foreclosure concerning esters for synthetic lubricants.

Customer foreclosure

288. The market shares on the downstream level [are 20-30] % in any potential segment. Therefore, and based on the Commission's non-horizontal guidelines, foreclosure is unlikely. In addition, even if Cognis were to purchase all the esters for synthetic lubricants that BASF produces, the share of demand that might shift from other suppliers to Cognis is very small, giving BASF's insignificant market share. Therefore competitors will not be deprived of a customer that is crucial for the competitors' presence as well as the ability and incentive to compete.

289. Therefore, both input and customer foreclosure seem unlikely as a result of the vertical relationship between the upstream market for esters for synthetic lubricants and the downstream market for finished synthetic lubricants.

290. For these reasons the Commission considers that the proposed transaction does not raise serious doubts as to its compatibility with the internal market regarding the said vertical link.

8. MAA (upstream) – Hydroxy Methacrylates (downstream)

291. BASF produces Methacrylic acid ("MAA"). Cognis uses MAA in its downstream production of hydroxy methacrylates.

8.1. MAA

8.1.1. Relevant product market

292. MAA is a monomer which is the base for a major proportion of the other products of methacrylic chemistry. MAA is processed into other methacrylic products, primarily esters for synthetic lubricants. One important use of MAA is in paint and varnish resins and dispersions, which in turn are processed into paints and different kinds of varnish.
293. BASF submits that the product market for MAA should be defined as being distinct from methyl methacrylate (MMA) because MAA and MMA are not direct substitutes for each other on either demand or supply side. Moreover, MAA-derived products achieve distinct and specific functionality which cannot be replaced by other products containing, for example acrylic esters such as butyl acrylate.
294. In its *Veba/Degussa* decision, the Commission considered that MAA constitutes a separate market from methyl methacrylate (MMA), which is likewise a basic monomer and closely related to MAA, in view of the fact that MAA and MMA confer different properties on the products into which they are processed, and are not interchangeable from the user's point of view.⁶³
295. The majority of respondents to the market investigation confirmed the demand and supply side considerations and indicated that MAA constitutes a separate market.
296. In any event, for the purposes of the present decision it is not necessary to decide on the precise scope of the product market as no competition concerns will arise under any plausible market definition.

8.1.2. Relevant geographic market

297. Concerning the geographic scope of the market BASF submits that the market for MAA is at least EEA-wide but more likely worldwide.
298. In its *Veba/Degussa* decision, the Commission found that the market for MAA was at least EEA-wide.⁶⁴
299. The market investigation pointed towards an EEA wide market but also included some indications that the market could be wider than the EEA. In any event the precise market definition can be left open as no competition concerns arise under any plausible product market definition.

8.2 Hydroxy methacrylates

300. Hydroxy methacrylates have been described in para 91 above as part of an overall market for hydroxy monomers. However, for the purposes of assessing the vertical relationship the

⁶³ Case No IV/M.942 - *Veba/Degussa*, Commission decision of 3 December 1997, para. 15.

⁶⁴ Case No IV/M.942 - *Veba/Degussa*, Commission decision of 3 December 1997, para. 36.

segment for hydroxymethacrylates is decisive as only hydroxy methacrylates are produced on the basis of MAA.

8.3. Assessment

301. BASF estimates the parties' market shares (volume) as follows:

Product	Worldwide			EEA		
	BASF	Cognis	combined	BASF	Cognis	combined
MAA (upstream)	[10-20] %	0	[10-20] %	[20-30] %	0	[20-30] %
hydroxy monomers (downstream)	[0-5] %	[10-20] %	[10-20] %	[10-20] %	[40-50] %	[50-60] %
Hydroxy methacrylates	0	[20-30] %	[20-30] %	0	[50-60] %	[50-60] %

302. On the upstream level BASF's market shares for MAA [are 20-30] % with several competitors being active on that market, such as MRC, Evonik and Dow who are capable of supplying MAA. In addition, BASF submits that all other major producers of hydroxy methacrylates ([...]) are vertically integrated and produce their own MAA. This has been confirmed by the market investigation.

303. In view of the fact that market shares below 30% are unlikely to lead to vertical issues⁶⁵, the presence of other strong suppliers and the fact that major methacrylic acid producers are vertically integrated, the Commission considers that input foreclosure is unlikely post transaction.

304. Concerning potential customer foreclosure, the Commission notes that Cognis only accounts for a relatively small portion of the MAA demand within the EEA and worldwide. When subtracting the amounts of MAA currently supplied by BASF to Cognis, the amount will be approximately [10-20] % of the total EEA demand for MAA. The transaction could therefore not deprive MAA producers of a crucial customer. In addition, the Commission's market investigation has not revealed any concerns in the market with regard to MAA. In any event, BASF committed to divest Cognis' hydroxy monomers business (see paragraph 101-110). As a result, the Commission considers that the transaction will not cause any issues of customer foreclosure.

305. The Commission therefore considers that the vertical relationship of methacrylic acid and hydroxy monomers does not give rise to competitive concerns under either a worldwide or an EEA market for MAA.

⁶⁵ See Commission Guidelines on the assessment of non-horizontal mergers, OJ 2008 C 265, p. 6, ("Vertical Guidelines") para.25.

8.4 Methacrylic acid upstream – Esters for synthetic lubricants downstream

306. The parties estimate their market shares (by volume) as follows:

Product	worldwide			EEA		
	BASF	Cognis	combined	BASF	Cognis	combined
Methacrylic acid (upstream)	[10-20] %	0	[10-20] %	[20-30] %	0	[20-30] %
Esters for synthetic lubricants (downstream)	[0-5] %	[5-10] %	[5-10] %	[0-5] %	[5-10] %	[5-10] %

307. Market shares below 30% are unlikely to lead to vertical issues⁶⁶.

308. The main competitors in the market for MAA, and their respective market shares in the EEA, by value, are MRC/Lucite ([40-50] %), Evonik ([20-30] %) and Dow/Rohm&Haas ([0-5] %).

309. In addition, the application in esters for synthetic lubricants accounts for only [5-10] % of all sales of MAA by volume. Therefore, competitors in the downstream market for esters for synthetic lubricants would not find it any difficulty in sourcing MAA.

310. Subtracting the quantities of MAA already supplied to Cognis by BASF, the share of demand that might shift from other MAA suppliers to BASF as a consequence of the Transaction is only approximately [10-20] % of the total European demand. Thus the proposed transaction would not deprive BASF's competitors of a customer that is critical for the competitors' presence and ability and incentive to compete on the market for MAA.

311. The Commission therefore considers that the vertical relationship of methacrylic acid and esters for synthetic lubricants does not give rise to competitive concerns under either a worldwide or an EEA market for methacrylic acid.

9. HAS (upstream) – solvent extraction reagents (downstream)

312. BASF produces hydroxyl ammonium sulphate (HAS) which is an input for the production of solvent extraction reagents, produced by Cognis.

9.1. HAS

313. HAS is a versatile process chemical used in a number of industries: surface coatings, pharmaceuticals, rubber, textile, plastics, crop protection, metallurgy, detergents and the photographic industry. Crystallised HAS produced from HAS solution.

314. BASF submit that for the purposes of assessing the vertical relationship, HAS should be considered to constitute a separate product market since HAS is the only hydroxylamine

⁶⁶ See Commission Guidelines on the assessment of non-horizontal mergers, OJ 2008 C 265, p. 6, ("Non Horizontal Guidelines") para.25.

purchased by Cognis in more significant quantities for the production of solvent extraction reagents used in the mining industry (mainly for extraction of copper and nickel).

315. The market investigation has not revealed reasons why the market should be defined more narrowly than comprising HAS. The Commission has therefore based its assessment on HAS as relevant for the assessment of the present vertical relationship. This definition of HAS excludes HAS solution which is less pure and contains between 60% and 75% water and is principally used internally for the production of caprolactans.
316. Concerning the geographic scope in which HAS is sold, BASF submits that the market should be considered as worldwide. It is not necessary to decide on the geographic scope of the market as in any event no competition concerns will arise. The geographic scope for HAS solution is unlikely to exceed the EEA as it is uneconomical to transport large volumes of water.

9.2. Solvent extraction reagents

317. Solvent extraction reagents are chemicals used in the mining industry. BASF considers that solvent extraction reagents form a separate product market separate that is distinct from other mining chemicals with regard to the different physical and chemical processes that exist in this area (SLS, liquid ion exchange solvent extraction, flotation, agglomeration, dispersants). Concerning the geographic scope, BASF considers that the market is worldwide.
318. It is not necessary, however, to come to a final conclusion on the relevant product or geographic market for the purpose of assessing the vertical relationship since, under all alternative market definitions, no competition concerns would arise as a result of the transaction.

9.3. Assessment

319. BASF estimates the parties' market shares (value) as follows:

Product	worldwide			EEA		
	BASF	Cognis	combined	BASF	Cognis	combined
HAS (upstream)	[40-50] %	0	[40-50] %	[50-60] %	0	[50-60] %
all mining chemicals	[5-10] %	[5-10] %	[10-20] %	[0-5] %	[0-5] %	[0-5] %
of which solvent extraction reagents (downstream)	0	[50-60] %	[50-60] %	0	N/A ⁶⁷	N/A

320. The size of the worldwide market size for HAS is estimated at [20-25] kt/EUR [30-40] million. The EEA size is estimated at [5-10] kt/EUR [10-20] million. Most important competitors are

⁶⁷ The parties submit that Cognis only sells [0-5] % of its solvent extraction reagents in the EEA and does not have reliable estimates on the size of the EEA market.

UBE ([20-30] % worldwide), Grodno ([10-20] % worldwide) and Juhua ([5-10] % worldwide). In addition to those, there are several other producers of HAS and HAS solution who currently sell only minor part of their production to the merchant market but who use the HAS internally, in particular for the production of caprolactam. These producers are[...].

321. For solvent extraction reagents, BASF estimates the market size at [10-20] kt/ EUR [80-90] million worldwide. Concerning the EEA, BASF point out that there is very little mining activity in the EEA. Most important competitor for solvent extraction reagents is Cytec ([30-40] % worldwide). Apart from Cytec, Longlight, Zijin Mining Group and Shanghai Institute of Organic Chemistry are active, all with estimated market shares below [0-5] %.

Input foreclosure

322. BASF's market share for HAS are high both on a worldwide level and in the EEA. However, there are a number of competitors and, in addition, the market shares for HAS do not appear to be fully indicative of market power as there are a number of producers who only sell minor parts of their production to the merchant market but use it internally for the production of caprolactam. These producers include[...]. Also, there are several producers of HAS solution, the raw material of crystallised HAS, which is a commodity produced by many producers. The market investigation confirmed that crystallised HAS and HAS solution appear to be used interchangeably in most applications.
323. Also HAS is not an important input for solvent extraction reagent in terms of cost (estimated at [5-10] % of the production cost). Therefore, in order to achieve competitive advantages in the sale of solvent extraction reagents, BASF would have to increase prices for HAS very significantly. However, in view of the other HAS producers including those who currently only sell a minor part of their production to the merchant market it is likely that such price rise would be counteracted by BASF's HAS competitors.
324. Also, the majority of BASF's HAS production is currently sold to the merchant market and Cognis' HAS needs are less than [40-50%] of BASF's production. Therefore, BASF has strong incentives to continue supplying HAS to the merchant market in order to fill its capacity.
325. The Commission considers it is unlikely that BASF would be able to successfully raise prices for crystallised HAS because there are several other suppliers of (crystallised) HAS; HAS solution can easily be converted into crystallized HAS; HAS only represents a minor part of the production costs of solvent extraction reagents and that Cognis' HAS needs only account for a relatively small part of BASF's HAS production. Therefore, input foreclosure seems unlikely in the present case.

Customer foreclosure

326. Cognis has negligible sales of solvent extraction reagents (to a single customer) and indeed there is very little demand for solvent extraction reagents in the EEA as there is very little mining activity in Europe. Cognis' purchases of HAS account for less than [20-30]% of HAS demand in the EEA. Subtracting the quantities of HAS already supplied by BASF to Cognis, the share of demand that might shift from HAS competitors to BASF as a consequence of the transaction is about [10-20] % of total European HAS demand and much less on a global basis.

This indicates that the transaction will not deprive BASF's HAS competitors of a customer that is crucial for a competitor's presence, ability and incentive to compete on the HAS market.

327. In view of this, the Commission considers customer foreclosure unlikely in the present case.

328. The Commission considers that the transaction does not give rise to competition concerns in this vertical relationship.

10. Non-ionic surfactants (upstream) – Pesticides (downstream)

329. Both parties produce non-ionic surfactants that can be used in the production of pesticides, an area where BASF is active.

10.1. Non-ionic surfactants

330. Non-ionic surfactants are described in paragraph 20.

10.2. Pesticides

331. Agrochemicals comprise a large variety of pesticides that are designed to protect crops against all forms of damage. Following Commission practice in previous decisions⁶⁸, different agrochemical products form a number of relevant product markets: herbicides, insecticides, fungicides and seed treatment products which are the main four categories of pesticides where BASF is active.

332. Fungicides are agents that control fungi and moulds, herbicides are used for the protection against weeds and insecticides are designed to combat insects. The parties submit that, although pesticides can be further sub-segmented by application (agriculture or home use) and by type of crop, for the present case it would not be appropriate to further sub-segment this market. They claim that input materials (anionic and non-ionic surfactants and solvents) are used to produce all pesticides, without any concentrated effect on a single application or crop. In addition, the cost of surfactants and solvents is estimated to represent below 10% in the value of the pesticides.

333. There is no need to further sub-segment the fungicides, herbicides, insecticides and seeds treatment markets since the input material (anionic and non-ionic surfactants) is used in almost all pesticides, regardless of the crop.

334. Therefore the exact definition of the product market can be left open since there will be no competition concern with regard to the vertical relationship between non-ionic surfactants and pesticides.

335. Concerning the geographic scope of the market it has to be noted that non-ionic surfactants are used as input material for the manufacturing of pesticides. Therefore, for assessing the vertical relationship, the area in which the input is sourced by pesticides producers is relevant rather than the area in which pesticides producers sell the downstream product.

⁶⁸ COMP/M.1932-BASF/American Cyanamid (AHP), COMP/M.3465-Syngenta CP / Advanta.

Thus, there is no need to analyse potential national pesticides markets or to make distinctions based on the end use of each type of pesticides.

336. BASF submits that the cost of the input material does not vary based on the country for which the product is destined. In addition, BASF and its main competitors, to the extent they purchase non-ionic surfactants from the merchant market, source these input materials centrally for their respective production plants. BASF produces pesticides primarily in Ludwigshafen and sells them across the EEA. From all BASF's pesticide portfolio, the top [100-150] products are sold by average in [5-10] EEA countries. Moreover, competitors in pesticides sell these products in various Member States.
337. However, the precise geographic scope of the pesticides market can be left open in this case in the absence of competition concerns at EEA or global level.

10.3. Assessment

338. The following table shows the parties market shares in the upstream market of non-ionic surfactants and in the downstream markets in pesticides in 2009.

MARKET SHARES, EEA (2009)						
Product	BASF + Cognis volume (%)	BASF + Cognis value (%)	BASF volume (%)	BASF value(%)	Cognis volume (%)	Cognis value(%)
Non-ionic surfactants	[20-30] %	[20-30] %	[10-20] %	[10-20] %	[10-20] %	[10-20] %
Fungicides	N/A	[20-30] %	N/A	[20-30] %	-	-
Herbicides	N/A	[10-20] %	N/A	[10-20] %	-	-
Insecticides	N/A	[5-10] %	N/A	[5-10] %	-	-
Seed treatment products	N/A	[5-10] %	N/A	[5-10] %	-	-

Input foreclosure

339. Input foreclosure can arise when the vertically integrated firm resulting from the merger has a significant market power upstream. As the above table shows, this is not the case in relation to non-ionic surfactants. According to the Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings⁶⁹, it is unlikely to find competition concerns in non-horizontal mergers where the market shares are below 30%. Also BASF's rivals in pesticides would have alternative sources of supply for non-ionic surfactants, i.e. Sasol ([10-20] %), Shell ([10-20] %), Huntsman ([5-10] %), Ineos ([5-10] %), KLK ([5-10] %), AkzoNobel, Clariant, Croda, Dow, Galaxy Surfactants.
340. In addition, the cost of the non-ionic surfactants provided by Cognis represents less than [5-10] % of the total price of pesticides. The situation does not change if individual sub-segments of the market for non-ionic surfactants are considered.

⁶⁹ Paragraph 25.

341. A respondent to the Commission's market investigation raised concerns about the ability and incentive of the merged entity to foreclose downstream rivals. More precisely, the object of the said concerns was certain specific surfactants used in the production of pesticides. The respondent claimed that those surfactants were only manufactured by Cognis and internalising their production or sponsoring or certifying an alternative supplier would be expensive and time consuming.
342. A closer examination revealed that for certain products Cognis was supplying on the basis of formulations provided by its clients. These products, therefore, could be manufactured by other upstream competitors, given that the complainant has the formula. The parties also confirmed that there are alternative suppliers that could produce these products according to the said formula.
343. There were other two products which raised concerns, polyethyleneglycol cetyl/ stearyl ether and castor oil ethoxylated. At this regard, the parties identified a number of alternatives suppliers that were capable of manufacturing these non-ionic surfactants. In particular: Clariant, KLK, Sasol and Croda for polyethyleneglycol cetyl/ stearyl ether, and Croda, Sasol, KLK, Rhodia, Clariant and AZKO for castor oil ethoxylated. Also, the market investigation showed that there is more than one supplier for these inputs. Hence, even in the unlikely event that Cognis were to stop supplying them, alternative suppliers are available.
344. For some products BASF has no competing product therefore no incentive to foreclose its rivals downstream.

Customer foreclosure

345. BASF accounts for less than [0-5] % of the European demand for non-ionic surfactants, thus, even if it were to source them all from Cognis, there would be no change in the market structure. If, after the proposed transaction, BASF were to purchase all its non-ionic surfactants from Cognis, the share of demand that might shift from other suppliers of non-ionic surfactants to Cognis is very small⁷⁰. Therefore competitors will not be deprived of a customer that is crucial for the competitors' presence as well as the ability and incentive to compete on the market for non-ionic surfactants. Moreover, with an EEA market share of below 30% in any type of pesticides, BASF lacks market power downstream.
346. In addition, surfactants are used in many applications. Actually, less than [5-10] % of all non-ionic surfactants used by BASF are used as input material in pesticides.
347. On the basis of this, the Commission considers that both input and customer foreclosure are unlikely in the present case.

⁷⁰ Assuming that after the implementation of the proposed transaction, BASF will purchase its total non-ionic surfactants requirements from Cognis, these purchases would (at 2009 levels) account for only approximately [0-5] % of Cognis' sales of non-ionic surfactants in the EEA.

11. Anionic surfactants (upstream) – Fungicides (downstream)

348. Anionic surfactants are described in paragraphs 12-19 and 29-32.

349. Fungicides are described in paragraphs 332-337.

350. The following table shows the parties' market shares in the upstream market for anionic surfactants and the downstream market for fungicides.

MARKET DATA, EEA (2009)										
Product	Total market (kt)	Total market (Mio €)	BASF sales (kt)	BASF sales (Mio€)	BASF volume share	BASF value shares	Cognis sales (kt)	Cognis sales (Mio €)	Cognis volume shares	Cognis value shares
Anionic surfactants	[900-1000]	[1200-1400]	[...]	[...]	[0-5] %	[0-5] %	[...]	[...]	[10-20] %	[10-20] %
Fungicides	N/A	[2500-3000]	N/A	[...]	N/A	[20-30] %	-	-	-	-

351. The following table shows the parties' market shares in the upstream market for anionic surfactants in potential submarkets segmented based on the method of production (i.e. sulfonation, sulfation, carboxylation and phosphatation).

Anionic surfactants	2009 EEA market shares		2009 worldwide market shares	
	BASF	Cognis	BASF	Cognis
Sulfonates	[0-5] %	[0-5] %	[0-5] %	[0-5] %
Sulfates	[0-5] %	[30-40] %	[0-5] %	[20-30] %
Phosphates	[0-5] %	[10-20] %	[0-5] %	[0-5] %
Carboxylates	-		-	

352. BASF submits that all four types of anionic surfactants are used in the manufacture of fungicides. BASF estimates that less than [0-5] % of the sulfates that it purchases are used in the production of pesticides.

Input foreclosure

353. As the above table shows, with markets shares [of 10-20] % the merged entity will not enjoy significant market power upstream. Even when considering the potential market of sulfates, the merged entity will not enjoy significant market power upstream. BASF's rivals in pesticides have many alternative sources of supply for anionic surfactants, i.e. Sasol, Cytec, Huntsman, Rhodia or Stepan. The situation does not change if individual sub-segments of the market for anionic surfactants are considered.

354. As in the case of non-ionic surfactants used in the production of pesticides, one respondent to the Commission's market investigation expressed concerns about the ability and incentive of the merged entity to foreclose upstream market. The respondent claimed that those

surfactants were only manufactured by Cognis and there were no alternative suppliers in the market.

355. After a close examination the Commission discovered that for a product Cognis was supplying on the basis of formulations provided by its clients. The parties confirmed that there are alternative suppliers that could manufacture these products according to the formula.
356. As well, in the case of dodecylbenzenesulfonic acid, calcium salt, texapon F and disopropylnaphtalenesulfonic acid, sodium salt, according to the parties, a number of alternative suppliers will remain in the market post-merger. Specifically, Rhodia is an alternative supplier at least for dodecylbenzenesulfonic acid and calcium salt; Huntsman, Clariant and Rhodia are alternative suppliers for texapon F and Huntsman, Sasol and Stepan for dodecylbenzenesulfonic acid and calcium salt. Also, the market investigation showed that there is more than one supplier for these inputs. Hence, even in the unlikely event that Cognis were to stop supplying them alternative suppliers are available.
357. Finally, for some products BASF has no competing product, therefore no incentive to foreclose its rival's downstream.

Customer foreclosure

358. Surfactants are used in many applications. Less than [5-10] % of all anionic surfactants used by BASF are used as input material in pesticides. BASF accounts for less than [0-5] % of the European demand for anionic surfactants, thus, even if it were to source them all from Cognis, there would be no change in the market structure. If after the proposed transaction BASF were to purchase all its anionic surfactants from Cognis, the share of demand that might shift from other suppliers of non-ionic surfactants to Cognis is very small⁷¹. Therefore competitors will not be deprived of a customer that is crucial for the competitors' presence as well as the ability and incentive to compete on the market for non-ionic surfactants. Moreover, with an EEA market share of below [20-30] % in fungicides, BASF lacks market power downstream.

12. Solvents (upstream) – Fungicides (downstream)

12. 1. Solvents

359. Solvents are liquids which have the ability to dissolve, suspend or extract other materials. They make it possible to process, apply, clean or separate materials. They can be used as input in the production of pesticides.

⁷¹ Assuming that after the implementation of the proposed transaction, BASF will purchase its total anionic surfactants requirements from Cognis, these purchases would (at 2009 levels) account for only approximately [0-5] % of total European demand.

360. BASF submits that chemically, organic solvents can be grouped in four major groups: (i) oxygenated solvents; (ii) hydrocarbons; (iii) halogenates and (iv) others (including so-called green solvents based on natural based fatty alcohols or fatty acids). Within each group there may be sub-groups constituting separate product markets.
361. Oxygenated solvents are organic solvents, molecules of which contain oxygen. They comprise mainly alcohols, glycols, esters and ketones. Oxygenated solvents are widely used in the paints, inks, pharmaceuticals, fragrance sectors, adhesives, cosmetics, detergents, food industries and, to a lesser degree, agriculture.
362. Green solvents are solvents based on natural (predominantly plant-based) raw materials, which are derived from the processing of agricultural crops. They have a unique composition which minimizes the use and generation of hazardous chemicals.
363. The Commission has in the past analysed individual solvents based on chemical structure⁷². In *COMP/M.4972-Permira/Arysta*⁷³ the Commission analysed the upstream markets to crop protection products on the basis of (i) active substances (the substance that actively controls and regulates the pest) and (ii) inerts, including solvents, fillers and adjuvants⁷⁴. The parties therefore suggested that it may be appropriate to analyse solvents used in agricultural applications.
364. However, there is no need to precisely define this product market in the absence of competition concerns in connection to this vertical relationship.
365. BASF submits that the relevant geographic market for oxygenated solvents, green solvents and solvents used in the agricultural sector is at least EEA-wide because: (i) solvents are easily transported (by sea and land within the EEA and between world regions) and transport costs are not high; (ii) price levels for comparable quantities are very similar throughout and often beyond the EEA; and (iii) there are no regulatory or customs barriers to trade.
366. In *COMP/M.2314 - BASF/Eurodiol/Pantochim*⁷⁵ the Commission concluded that the EEA was the relevant geographic market for the solvents gamma-butyrolacton (GBL), N-methylpyrrolidon (NMP) and tetrahydrofuran (THF).
367. For the purposes of the present case and in the absence of competition concerns under any market definition there is no need to define the scope of the market.

12.2. Fungicides

368. Fungicides are described in paragraph 332-337.

⁷² In *COMP M.3506 - Celanese/Degussa JV*, the Commission considered butyl acetate but did not finally decide on the precise extent of the relevant market. In *COMP/M.2314 - BASF/Eurodiol/Pantochim* the Commission analysed butanediol-related solvents, which were further divided into gamma-butyrolacton, N-methylpyrrolidon and tetrahydrofuran.

⁷³ Decision of 25 February 2008.

⁷⁴ *COMP/M.4972-Permira/Arysta*, paragraph 12.

⁷⁵ Paragraph 58.

12.3 Assessment

369. The following table shows the parties' market shares in the upstream market for solvents and the downstream market for fungicides.

MARKET DATA, EEA (2009)										
Product	Total market (kt)	Total market (Mio €)	BASF sales (kt)	BASF sales (Mio€)	BASF volume share	BASF value shares	Cognis sales (kt)	Cognis sales (Mio €)	Cognis volume shares	Cognis value shares
Solvents for use in agricultural products	[100-150]	[150-200]	[...]	[...]	[0-5] %	[0-5] %	[...]	[...]	[0-5] %	[5-10] %
Green solvents	[30-40]	[80-90]	-	-	-	-	[...]	[...]	[10-20] %	[10-20] %
Fungicides	N/A*	[2500-3000]	N/A*	[...]	N/A*	[20-30] %	-	-	-	-

Input foreclosure

370. With a combined EEA market share of [10-20] % in the upstream market for solvents for use in agricultural applications (or [10-20] % if green solvents were regarded as a separate market), the combined entity would lack market power on the upstream market. Therefore, BASF's rivals in fungicides have alternative sources of supply for solvents, *i.e.* Dow, Lyondell, Shell, Ineos or Celanese.

371. However, one respondent raised concerns about the ability and incentive of the merged entity to foreclose the downstream market, claiming that the solvents required for the production of fungicides were only manufactured by Cognis.

372. After a closer examination, the Commission established that for the products that BASF had competing products the complainant had alternative sources. In addition to this, the parties submitted a list with alternatives suppliers that could be able to supply these inputs, such as Procter&Gamble, KAO, Sasol, Stepan, Daudruy or Sofiprotoel.

373. In view of this, the Commission considers that the merged entity lacks the ability to foreclose input or to raise prices for its downstream competitors.

Customer foreclosure

374. Assuming that after the implementation of the proposed transaction, BASF will purchase its total green solvents requirements from Cognis, these purchases would (at 2009 levels) account for only approximately [0-5] % of total European demand. If after the proposed

transaction BASF were to purchase all its green solvents from Cognis, the share of demand that might shift from other suppliers of this product to Cognis is, thus, very small. Therefore competitors will not be deprived of a customer that is crucial for the competitors' presence as well as the ability and incentive to compete on the market for green solvents. Moreover, with an EEA market share of below [30-40] % in fungicides, BASF lacks market power downstream.

375. Therefore, both input and customer foreclosure seem unlikely as a result of the vertical relationship between solvents for use in pesticides upstream and fungicides downstream.

376. For these reasons the Commission considers that the proposed transaction does not raise serious doubts as to its compatibility with the internal market regarding the said vertical link.

13. DMA (upstream) – solvents for use in agricultural applications (downstream)

377. BASF produces Dimethylamine (DMA). Cognis uses DMA for the production of “green” solvents which are used in agricultural applications.

13.1 DMA

378. DMA is an input chemical product used in several applications, including surfactants, solvents, agrochemicals and dimethylethanolamine (DMEA).

379. BASF considers that DMA belongs to a wider market comprising methylamines products. Concerning the geographic scope should be considered as at least EEA wide but more likely worldwide.

380. In any event, the product and geographic market definition can be left open in the present case as no competition concerns arise under any plausible market definition.

13.2. Solvents for use in agricultural applications

381. Description of solvents for use in agricultural applications: see para 363-367.

13.3 Assessment

382. BASF estimates the parties' market shares (volume) as follows:

Product	worldwide			EEA		
	BASF	Cognis	combined	BASF	Cognis	combined
all methylamines	<5%	0	<5%	[30-40] %	0	[30-40]%
of which DMA	<10%	0	<10%	[20-30] %	0	[20-30] %
solvents for use in agricultural products	[0-5] %	[0-5] %	[0-5] %	[0-5] %	[0-5] %	[5-10] %
of which green solvents	0	[10-20] %	[10-20] %	0	[10-20] %	[10-20] %

383. The market shares of BASF and Cognis are moderate or low on the up- and downstream levels. In a potential overall market for all methylamines it would slightly exceed 30%, on a market for DMA only, the market shares would be even lower.

384. As market shares below 30% are unlikely to lead to vertical issues⁷⁶ and as the investigation has not revealed any element that would point to competition problems, the Commission considers that vertical relationship of DMA and solvents for use in agricultural products does not give rise to competitive concerns under either conceivable market definition.

14. Anionic surfactants (upstream) – Tunnel boring chemicals (downstream)

385. Cognis is active upstream in the production and supply of certain anionic surfactants which are used as input materials for certain tunnel boring chemicals. At present, only very small quantities are used in the production of soil conditioners that are used by tunnel boring machines. BASF is active in the production and sale of soil conditioners for tunnel-boring machines ('TBM soil-conditioners').

14.1. Anionic surfactants

386. Anionic surfactants are described in paras 12-19 and 29-32.

14.2. Soil conditioners for tunnel boring machines

387. Tunnel-boring chemicals are used to improve the performance of tunnel-boring machines in large underground construction projects, by, for example, softening the ground removed by tunnel-boring machines (TBM), suppressing the dust created by boring or penetrating hard rocks. Tunnel-boring chemicals include, among others, soil conditioners, anti-abrasion and dust suppressant products, sealing greases and grouting products, whether it is by soft ground, or open hard rock methods.

388. The Commission has not considered the tunnel-boring chemicals market before.

389. BASF submits that tunnel-boring chemicals should be considered as a separate product market because the products are not used for any other application outside tunnel-boring construction. Soil conditioners are one category of tunnel-boring chemicals. They are primarily polymer foams based on anionic surfactants, anti-clay additives and long chain polymers, which help to reduce soil permeability and the stickiness of soil and minimise clogging risk, torque and wear reduction at the cutter head of the machines. Since TBM excavation has to manage a variety of geological conditions and soil behaviour, soil conditioners are introduced in front of the cutter head of a machine to change the natural rheological characteristics in order to maintain optimal advance rates and/or stability of the machine and to minimize or prevent ground movement on the surface.

390. BASF considers that different soil conditioners are interchangeable from a demand-side and supply-side perspective. Customers consider anti-clay agents, polymer foams and other soil conditioners as substitutable products. Chemical TBM additives from different suppliers are

⁷⁶ See Commission Guidelines on the assessment of non-horizontal mergers, OJ 2008 C 265, p. 6, ("Non-Horizontal Guidelines") para.25.

interchangeable and customers can easily switch from one supplier to another without the need of changing the tunnel boring machine. All soil conditioners are manufactured using similar equipment and manufacturers can easily switch to the production of different soil conditioners.

391. However, for the purpose of the proposed transaction the precise product market definition can be left open in the absence of competition concerns.

392. BASF considers that the market for tunnel boring chemicals, or a narrower segment of soil conditioners, is at least EEA-wide. Only a small proportion (less than 1%) of TBM chemicals is sold between continents, although BASF and other producers of TBM chemicals primarily distribute their products to construction sites located in a particular region (Europe, Asia and North America). TBM chemicals can be easily transported over long distances (by trucks, tankers, ship containers), transportation costs representing between 5 to 10% of the total price of these products, depending on volume and distance. There are no major price differences between the EEA Member States and other world regions. Prices typically vary due to additional local taxes or transport costs.

393. However, the exact geographic scope of the market can be left open in the absence of competition concerns at either EEA or global level.

14.3. Assessment

394. The following table shows the parties' market shares in the upstream market for anionic surfactants and the downstream market for tunnel boring chemicals (including the possible sub-segment of TBM soil conditioners).

MARKET DATA, EEA (2009)										
Product	Total market (kt)	Total market (Mio €)	BASF sales (kt)	BASF sales (Mio€)	BASF volume share	BASF value shares	Cognis sales (kt)	Cognis sales (Mio €)	Cognis volume shares	Cognis value shares
Anionic surfactants	[900-1000]	[1200-1400]	[...]	[...]	[0-5] %	[0-5] %	[...]	[...]	[10-20] %	[10-20] %
TBM chemicals	[10-20]	[20-30]	[...]	[...]	[20-30] %	[20-30] %	-	-	-	-
TBM soil conditioners	[5-10]	[10-20]	[...]	[...]	[30-40] %	[30-40] %	-	-	-	-

395. The following table shows the parties' market shares in the upstream market for anionic surfactants segmented based on the method of production (i.e. sulfonation, sulfation, carboxylation and phosphatation).

Anionic surfactants	2009 EEA market shares		2009 worldwide market shares	
	BASF	Cognis	BASF	Cognis
Sulfonates	[0-5] %	[0-5] %	[0-5] %	[0-5] %
Sulfates	[0-5] %	[30-40] %	[0-5] %	[20-30] %
Phosphates	[0-5] %	[10-20] %	[0-5] %	[0-5] %
Carboxylates	-		-	

All four types of anionic surfactants are used in the manufacture of all types of TBM chemicals. In addition, BASF considers that all four types of anionic surfactants are fully exchangeable as regards the production of TBM chemicals.

Input foreclosure

396. The market shares of the parties in anionic surfactants are moderate and [are 10-20] % in the EEA in an overall market for anionic surfactants. When looking at potential submarkets the market shares exceed 30% only for sulfates. According to the Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings⁷⁷, it is unlikely to find competition concerns in non-horizontal mergers where the market shares are below 30%. In spite of the market shares [of 30-40] % in the segment of sulfates, there are still several competitors who are able to supply soil conditioner producers and to counteract any attempt of BASF to raise prices. These competitors include Sasol, Cytec, Huntsman, Rhodia or Stepan.

397. Therefore, the Commission considers that the transaction will not cause any input foreclosure concerns in this field.

Customer foreclosure

398. As described in the table above, the market shares on the downstream level are moderate. In any event, only very small quantities of anionic surfactants are used for the production of tunnel boring chemicals. Therefore customer foreclosure can be excluded.

399. Therefore, both input and customer foreclosure seem unlikely as a result of the vertical relationship between anionic surfactants upstream and the potential market of TBM soil conditioners downstream.

400. For these reasons the Commission considers that the proposed transaction does not raise serious doubts as to its compatibility with the internal market regarding the said vertical link.

15. PAG (upstream) – Tunnel boring chemicals (downstream)

401. Apart from anionic surfactants, also PAG is used for the production of tunnel boring chemicals.

⁷⁷ Paragraph 25.

402. PAGs are described in paragraph 44-49.

403. Tunnel boring chemicals are described in paragraph 387-393.

404. The following table shows the parties' market shares in the upstream market for PAG and the downstream market for tunnel boring chemicals.

MARKET DATA, EEA (2009)										
Product	Total market (kt)	Total market (Mio €)	BASF sales (kt)	BASF sales (Mio€)	BASF volume share	BASF value shares	Cognis sales (kt)	Cognis sales (Mio €)	Cognis volume shares	Cognis value shares
PAG	[200-250]	[300-350]	[...]	[...]	[10-20]	[10-20] %	[...]	[...]	[0-5] %	[0-5] %
TBM chemicals	[10-20]	[20-30]	[...]	[...]	[20-30] %	[20-30] %	-	-	-	-
TBM soil conditioners	[5-10]	[10-20]	[...]	[...]	[30-40] %	[30-40] %	-	-	-	-

405. According to the Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings⁷⁸, it is unlikely to find competition concerns in non-horizontal mergers where the market shares are below 30%.

406. The parties' market shares are moderate on both upstream and downstream level. In addition, BASF started using PAG in TBM soil conditioners in 2010 only. Currently, less than [0-5]% of the PAG purchased by BASF are used for the production of TBM chemicals⁷⁹. Therefore, BASF's rivals in TBM soil conditioners would have alternative sources of supply for PAG like Clariant ([20-30] %), Ineos ([10-20] %), Sasol ([10-20] %), Dow ([10-20] %).

407. Also, only relatively small amounts of PAG are used as input in TBM soil conditioners (less than [10-20] %). In view of the moderate market shares on both up- and downstream level, the presence of significant competitors and the fact that tunnel boring chemicals are only a small application for PAG, input and customer foreclosure seem unlikely as a result of the vertical relationship between PAG upstream and the potential market for TBM soil conditioners downstream.

408. For these reasons the Commission considers that the proposed transaction does not raise serious doubts as to its compatibility with the internal market regarding the said vertical link.

⁷⁸ Paragraph 25.

⁷⁹ In the long term BASF estimates that approximately [10-40] % of the current content of anionic surfactants in the TBM soil conditioners would be replaced by PAG.

V.CONCLUSION

409. For the above reasons, the Commission has decided not to oppose the notified operation as modified by the commitments and to declare it compatible with the internal market and with the functioning of the EEA Agreement, subject to full compliance with the conditions in Section B and the corresponding Schedule of the commitments annexed to the present decision and with the obligations contained in the other sections of the said commitments. This decision is adopted in application of Article 6(1)(b) in conjunction with Article 6(2) of Council Regulation (EC) No 139/2004.

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

By email and by fax: 00 32 2 296 4301
European Commission
Directorate-General for Competition
Merger Registry
70 Rue Joseph II / Jozef-II straat 70
B-1000 Brussels

Case M. 5927 BASF/Cognis

COMMITMENTS TO THE EUROPEAN COMMISSION

Pursuant to Article 6(2) of Council Regulation (EC) No. 139/2004 as amended (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 Cognis GmbH (“**Cognis**”) compatible with the common market and the EEA Agreement by its decision pursuant to Article 6(1)(b) of the Merger Regulation (the “**Decision**”).

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

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

Section A. Definitions

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

Adducts: range of specialty monomers produced at the Hythe Site by the alkoxylation (with ethylene and propylene oxides) of hydroxy methacrylates using proprietary catalyst and reaction technology, used in industrial coatings, rapid prototyping systems, photo-resists for printed circuit manufacture and UV curable resins.

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

BASF: BASF SE, whose business address is at Carl-Bosch Strasse 38, Ludwigshafen 67056, Germany.

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

Cognis: Cognis GmbH, whose business address is at Rheinpromenade 1, Monheim 40789, Germany.

Contact Lens Materials: range of high purity materials and blends produced at the Hythe Site and sold mainly under the [...] trademark for use in conventional high water hydroxy methacrylates and silicone hydrogel soft contact lenses.

Divestment Business: the businesses as defined in Section B and the Schedule that BASF commits to divest.

Divestiture Trustee: one or more natural or legal person(s), independent from BASF or Cognis, who is approved by the Commission and appointed by BASF and who has 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 appointed by BASF to manage the day-to-day business of the Divestment Business under the supervision of the Monitoring Trustee.

Hydroxy Methacrylates: range of hydroxy methacrylates (HEMA and HPMA) produced at the Hythe Site via a catalysed reaction of methacrylic acid with ethylene oxide (“EO”) and propylene (“PO”) oxide, used as cross-linkers in the production of a wide variety of automotive OEM topcoat and refinish paints, industrial coatings, sealants and adhesives.

Hythe Site: tangible assets located at Charleston Rd Industrial Estate, Hardley, Hythe, Southampton, SO45 3ZG, United Kingdom, involved in the production, business administration, R&D and application development for Hydroxy Methacrylates, Multifunctional Methacrylates, Adducts, PAGs, PAG-based Lubricants, Contact Lens Materials and Other Products.

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

Monitoring Trustee: one or more natural or legal person(s), independent from BASF or Cognis, 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.

Multifunctional Methacrylates: range of specialty methacrylate monomers produced presently at the Hythe Site by transesterification of an alcohol with methyl methacrylate, used to modify the properties of high performance resins systems in a wide variety of applications, including anaerobic adhesives, fixings and sealants, industrial coatings and resin composites for automotive and aeronautical applications.

Other Products: the following minor products produced using the alkoxylation technology: [...]

PAGs: polyalkylene glycols, including specialty EO/PO co-polymers produced by alkoxylation by the reaction of various alcohols with either EO or PO or a random or block combination of both EO and PO and including polyalkylene glycols with the terminal hydroxyl group being

capped methyl, sold mainly under the [...] trademark and used in a wide range of niche applications including: lubricant base fluids (gearbox, compressor, fire-resistant hydraulic fluid, metalworking fluids, textile, etc.), reactive intermediates for silicone polyether manufacture, process aids, adhesives and foam control components in various aqueous applications.

PAG-based Lubricants: range of blends using the PAGs and proprietary additive formulation know-how at the Hythe Site, sold mainly under the [...] trademark and mainly used in industrial gearboxes, compressors, refrigeration systems and in automotive air-conditioning compressors.

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

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

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 Business

Commitment to divest

1. In order to restore effective competition, BASF commits to divest, or procure the divestiture of the Divestment Business by the end of the Trustee Divestiture Period as a going concern to a Purchaser and on terms of sale approved by the Commission in accordance with the procedure described in paragraph 14. To carry out the divestiture, BASF commits to find a Purchaser and to enter into a final binding sale and purchase agreement for the sale of the Divestment Business within the First Divestiture Period. If BASF has not entered into such an agreement at the end of the First Divestiture Period, BASF shall grant the Divestiture Trustee an exclusive mandate to sell the Divestment Business in accordance with the procedure described in paragraph 23 in the Trustee Divestiture Period.
2. BASF shall be deemed to have complied with this commitment if, by the end of the Trustee Divestiture Period, BASF or an Affiliated Undertaking has entered into a final binding sale and purchase agreement for the Divestment Business, if the Commission approves the Purchaser and the terms in accordance with the procedure described in paragraph 14 and if the closing of the sale of the Divestment Business takes place within a period not exceeding three months after the approval of the Purchaser and the terms of sale by the Commission.
3. In order to maintain the structural effect of the Commitments, BASF 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 Business, unless the Commission has previously found that the structure of the market has changed to such an extent that the absence of influence over

the Divestment Business is no longer necessary to render the proposed concentration compatible with the common market.

Structure and definition of the Divestment Business

4. The Divestment Business, as described more fully in the Schedule, consist of:
 - 4.1. The Hydroxy Methacrylates business, being all tangible and intangible assets including all patents, the [...] trademark, other intellectual property rights, technology and know-how required in the production and sale of Hydroxy Methacrylates, as well as supply contracts, customer lists and all pertinent Personnel required to run the Hydroxy Methacrylates business. In relation to the supply contracts, BASF commits, at the option of the Purchaser, to supply [...] methacrylic acid [...].
 - 4.2. The Multifunctional Methacrylates, Adducts and Other Products businesses, being all tangible and intangible assets (except for intellectual property rights, technology and know-how) required in the production and sale of Multifunctional Methacrylates, Adducts and Other Products as well as supply contracts, customer lists and all pertinent Personnel required to run these businesses. BASF retains the intellectual property rights, technology, quality control specifications and know-how relating to the production and sale of Multifunctional Methacrylates, Adducts and Other Products, except for the [...] trademark, but commits to grant to the Purchaser a non-exclusive, paid-up irrevocable license to all technology and know-how required to produce at the Hythe Site or another location in the EEA and sell Multifunctional Methacrylates, Adducts and Other Products produced presently at the existing manufacturing units at the Hythe Site. [...].
 - 4.3. The Hythe Site, including the tangible assets involved in the production, business administration, R&D and application development for Hydroxy Methacrylates, Multifunctional Methacrylates, Adducts and Other Products, as well as for the following products: PAGs, PAG-based Lubricants and Contact Lens Materials. BASF will relocate the Contact Lens Materials assets and business from the Hythe Site [...].
 - 4.4. The sale of the Hythe Site is conditional upon the Purchaser entering into a cost-plus toll production agreement for a minimum duration of [...] years after Closing for the following stipulated volumes of PAGs and PAG-based Lubricants that are presently produced at the Hythe Site. [...] BASF commits to grant to the Purchaser with effect as of the Closing Date a non-exclusive, paid-up irrevocable license to all intellectual property rights, technology and know-how required to produce at Hythe or another location within the EEA and sell PAGs and PAG-based Lubricants produced presently at the existing manufacturing units at the Hythe Site, except for the relevant trademarks. [...]

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 Business, in accordance with good business practice, and shall minimise as far as possible any risk of loss of competitive potential of the Divestment Business. In particular 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 the Divestment Business or that might alter the nature and scope of activity, or the industrial or commercial strategy or the investment policy of the Divestment Business;
 - (b) to make available sufficient resources for the development of the Divestment Business, on the basis and continuation of the existing business plans;
 - (c) to take all reasonable steps, including appropriate incentive schemes (based on industry practice), to encourage all Key Personnel to remain with the Divestment Business.

Hold-separate obligations of BASF and Cognis

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

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 Business. In particular, the participation of the Divestment Business in a central information technology network shall be severed to the extent possible, without compromising the viability of the Divestment Business. BASF may obtain information relating to the Divestment Business which is reasonably necessary for the divestiture of the Divestment Business or whose disclosure to BASF is required by law.

Non-solicitation clause

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

Due Diligence

10. In order to enable potential purchasers to carry out a reasonable due diligence of the Divestment Business, 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 Business;
 - (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 Business and developments in the negotiations with such potential purchasers to the Commission and the Monitoring Trustee no later than 10 days after the end of every month following the Effective Date (or otherwise at the Commission's request).
12. BASF shall inform the Commission and the Monitoring Trustee on the preparation of the data room documentation and the due diligence procedure and shall submit a copy of an information memorandum to the Commission and the Monitoring Trustee before sending the memorandum out to potential purchasers.

Section D. The Purchaser

13. In order to ensure the immediate restoration of effective competition, the Purchaser, in order to be approved by the Commission, must:
 - (a) be independent of and unconnected to the Parties;
 - (b) have the financial resources, proven expertise and incentive to maintain and develop the Divestment Business as a viable and active competitive force in competition with BASF and other competitors;
 - (c) neither be likely to create, in the light of the information available to the Commission, *prima facie* competition concerns nor give rise to a risk that the implementation of the Commitments will be delayed, and must, in particular, reasonably be expected to obtain all necessary approvals from the relevant regulatory authorities for the acquisition of the Divestment Business (the before-mentioned criteria for the purchaser hereafter the "**Purchaser Requirements**").

14. The final binding sale and purchase agreement 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 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 one month before the end of the First Divestiture Period or if the Commission has rejected a purchaser proposed by BASF at that time or thereafter, BASF shall appoint a Divestiture Trustee to carry out the functions specified in the Commitments for a Divestiture Trustee. The appointment of the Divestiture Trustee shall take effect upon the commencement of the Trustee Divestiture Period.

16. The Trustee shall be independent of BASF or Cognis, 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 BASF 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 BASF

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 fulfill 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 fulfill 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 BASF

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 Business 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 Business, and the keeping separate of the Divestment Business from the business retained by the Parties, in accordance with paragraphs 5 and 6 of the Commitments;
- (b) supervise the management of the Divestment Business as distinct and saleable entities, in accordance with paragraph 7 of the Commitments;
- (c) (i) in consultation with BASF, determine all necessary measures to ensure that BASF 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 Business, in particular strive for the severing of the Divestment Business' participation in a central information technology network to the extent possible, without compromising the viability of the Divestment Business, and (ii) decide whether such information may be disclosed to BASF as the disclosure is reasonably necessary to allow BASF to carry out the divestiture or as the disclosure is required by law;
- (d) monitor the splitting of assets and the allocation of Personnel between the Divestment Business and BASF or Affiliated Undertakings;
- (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' compliance with the conditions and obligations attached to the Decision, in particular the maintenance of the full economic viability, marketability or competitiveness of the Divestment Business, the holding separate of the Divestment Business and the non-disclosure of competitively sensitive information;
- (v) review and assess potential purchasers as well as the progress of the divestiture process and verify that, dependant on the stage of the divestiture process, (a) potential purchasers receive sufficient information relating to the Divestment Business and the Personnel in particular by reviewing, if available, the data room documentation, the information memorandum and the due diligence process, and (b) potential purchasers are granted reasonable access to the Personnel;
- (vi) provide to the Commission, sending 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 Business so that the Commission can assess whether the business is held in a manner consistent with the Commitments and the progress of the divestiture process as well as potential purchasers. In addition to these reports, the Monitoring Trustee shall promptly report in writing to the Commission, sending 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 the Divestment Business after the Sale and as to whether the Divestment Business is sold in a manner consistent with the conditions and obligations attached to the Decision, in particular, if relevant, whether the Sale of the Divestment Business without one or more Assets or not all of the Personnel affects the viability of the Divestment Business after the sale, taking account of the proposed purchaser.

Duties and obligations of the Divestiture Trustee

- 23. Within the Trustee Divestiture Period, the Divestiture Trustee shall sell at no minimum price the Divestment Business to a purchaser, provided that the Commission has approved both the purchaser and the final binding sale and purchase agreement in accordance with the procedure laid down in paragraph 14. The Divestiture Trustee shall include in the sale and purchase agreement such terms and conditions as it considers appropriate for an expedient sale in the Trustee Divestiture Period. In particular, the Divestiture Trustee may include in the sale and purchase agreement such customary representations and warranties and indemnities as are reasonably required to effect the sale. The Divestiture Trustee shall protect the legitimate financial interests of BASF, subject to BASF' 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 co-operation, 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' or the Divestment Business' books, records, documents, management or other personnel, facilities, sites and technical information necessary for fulfilling its duties under the Commitments and BASF and the Divestment Business shall make available to the Trustee one or more offices on their premises and shall be available for meetings in order to provide the Trustee with all information necessary for the performance of its tasks.
- 26. BASF shall provide the Monitoring Trustee with all managerial and administrative support that it may reasonably request on behalf of the management of the Divestment Business. This shall include all administrative support functions relating to the Divestment Business which are currently carried out at headquarters level (if any). 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 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 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’ 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 28 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 is in the best interest of an expedient sale.

IV. Replacement, discharge and reappointment of Trustee

30. If the Trustee ceases to perform its functions under the Commitments 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. The Review Clause

33. 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.

SIGNED ON: November 9, 2010

SIGNED BY:

.....
[...]

duly authorised by and on behalf of BASF SE

SCHEDULE

The Divestment Business

1. The Divestment Business as operated to date has the following legal and functional structure:
 - Cognis' production site located at Hythe (the Hythe Site), located at Industrial Estate, Hardley, Hythe, SO45 3ZG, Southampton, the United Kingdom. [...]
 - The Hythe Site is a production, business administration, R&D and application development site for the following products:
 - a. Hydroxy Methacrylates (HEMA and HPMA);
 - b. Multifunctional Methacrylates;
 - c. Adducts;
 - d. PAGs;
 - e. PAG-based Lubricants;
 - f. Contact Lens Materials; and
 - g. Other Products.
 - BASF commits to divest the following business:
 - The Hydroxy Methacrylates business, being all tangible and intangible assets including all patents, the [...] trademark, other intellectual property rights, technology and know-how required in the production and sale of Hydroxy Methacrylates, as well as supply contracts, customer lists and all pertinent Personnel required to run the Hydroxy Methacrylates business.
 - The Multifunctional Methacrylates, Adducts and Other Products businesses, being all tangible and intangible assets (except for intellectual property rights, technology and know-how) required in the production and sale of Multifunctional Methacrylates, Adducts and Other Products as well as supply contracts, customer lists and all pertinent Personnel required to run these businesses. BASF retains the intellectual property rights, technology, quality control specifications and know-how relating to the production and sale of Multifunctional Methacrylates, Adducts and Other Products, except for [...] trademark, but commits to grant to the Purchaser a non-exclusive, paid-up irrevocable license to all technology and know-how required to produce at the Hythe Site or another location in the EEA and sell Multifunctional Methacrylates, Adducts and Other Products produced presently at existing manufacturing units at the Hythe Site. [...]
 - The Hythe Site, including the tangible assets relating to the Hythe Site will be transferred in its entirety with the exception of the assets relating to the

Contact Lens Materials business, which BASF will remove from the Hythe Site [...]

- The sale of the Hythe Site is conditional upon the Purchaser entering into a cost-plus toll production agreement for a minimum duration of [...] years after Closing for the following stipulated volumes of PAGs and PAG-based Lubricants that are presently produced at the Hythe Site. [...]

BASF commits to grant to the Purchaser with effect as of the Closing Date a non-exclusive, paid-up irrevocable license to all intellectual property rights, technology and know-how required to produce at the Hythe Site or another location in the EEA and sell PAGs and PAG-based Lubricants produced presently at the existing manufacturing units at the Hythe Site, except for the relevant trademarks. [...]

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

(a) The Hythe Site, including but not limited to all manufacturing facilities, production lines, equipment, storage tanks, pumps, waste water treatment, owned by Cognis and used in the production of the following products:

- Hydroxy Methacrylates (HEMA and HPMA);
- Multifunctional Methacrylates, Adducts and Other Products; and
- PAG and PAG-based Lubricants.

Details on the assets of the Hythe Site to be divested are fully described in **Annex 1**.

(b) The following main intangible assets:

- Any patents that are required for the production of Hydroxy Methacrylates;
- All trademarks, including [...] trademark, owned by, assigned to or licensed to Cognis at the Effective Date that are specific to Hydroxy Methacrylates;
- Rights to all other intellectual property rights available to Cognis at the Effective Date and necessary for the Purchaser in order to manufacture and sell Hydroxy Methacrylates. These intellectual property rights may consist of formulations, technology, manufacturing know-how and any other secret know-how, trade secret, invention, application to register of any of the mentioned rights.

Details on the intangible assets included in the Divestment Business are contained in **Annex 2**.

(c) All licenses, permits and authorizations specific to the Hythe Site, including all relevant dossiers relating to such licenses, permits and authorizations available to

Cognis. A list of the main licenses required for the operation of the Hythe Site is provided in **Annex 3**.

- (d) All relevant data, books, records, and other documents available to Cognis and exclusively related to or necessary for the operation of the Hythe Site and the commercialization of the Hydroxy Methacrylates, Multifunctional Methacrylates, Adducts and Other Products, including existing customer records for the Hydroxy Methacrylates, Multifunctional Methacrylates, Adducts and Other Products (including by way of example relevant details concerning orders, deliveries, invoicing and billing collection for these products for each such customer sufficient to provide the Purchaser with a working knowledge of customers' requirements and preferences), provided that BASF may redact from such copies any information that does not relate to the Hydroxy Methacrylates, Multifunctional Methacrylates, Adducts or Other Products businesses. A list of the main customers for Hydroxy Methacrylates, Multifunctional Methacrylates, Adducts and Other Products is attached as **Annex 4**.
- (e) The Parties' best efforts to assign or novate all contracts, agreements, leases, commitments and understandings, in particular to assign contracts with Cognis' current customers and suppliers insofar as they relate to the Hydroxy Methacrylates, Multifunctional Methacrylates, Adducts and Other Products businesses and insofar they do not expire, terminate or give notice of termination before Closing. In relation to the supply contracts, BASF commits, at the option of the Purchaser, to supply [...] methacrylic acid [...] to the Hythe Site [...]. A list of the suppliers of raw materials is attached as **Annex 5**. A list of the main contractors for services is attached as **Annex 6**.
- (f) In line with applicable employment laws and other relevant legislation, the Key Personnel and all other employees currently employed at the Hythe Site as at the date of Closing (approximately [...] employees), [...]
- (g) In line with applicable employment laws and other relevant legislation, unless the Purchaser does not require them, [...] employees required for marketing, sales and distribution of the Hydroxy Methacrylates, Multifunctional Methacrylates, Adducts and Other Products, even if not located at the Hythe Site, will be transferred to the Purchaser. The Key Personnel functions and more details regarding the Divestment Business Personnel and the employees to be transferred to BASF are described in **Annex 7**.

3. The Divestment Business does not include:

- (a) The Contact Lens Materials business. BASF undertakes to relocate the assets and other elements relating to the Contact Lens Materials from the Hythe Site [...].
- (b) The PAG and PAG-based Lubricants businesses, except for the tangible assets located at Hythe for these businesses. For the avoidance of doubt, the Divestment Business does not include any intangible assets, intellectual property, [...] trademarks, or other rights, titles or interests exclusively associated with the

Contact Lens Materials, PAG or PAG-based Lubricants businesses, except for the appropriate license, which will include all necessary technology and know-how.

- (c) Intellectual property rights relating to the Multifunctional Methacrylates, Adducts and Other Products businesses, except for [...] trademark and the appropriate licenses, which will include all necessary technology and know-how.
- (d) Intellectual property rights included in (a), (b) and (c) above means all patents, trademarks, tradenames, technical information including, but not limited to the operation manual, standard operating procedures, process flow charts, detailed process and instrumentation diagrams, process control system (“PCS”) data (e.g. PCS programs, screenshots and data points of temperature and pressure where recorded), quality control specifications, customer specific quality requirements and specifications, testing data, customer approvals, customer specific product claims, process & instrumentation diagrams required for the production and sale of the Contact Lens Materials, PAGs and PAG-based Lubricants, Multifunctional Methacrylates, Adducts or Other Products. [...].
- (e) For the avoidance of doubt, the Divestment Business also does not include the employees listed under (i), (ii) and (iii) of Section 2(f) above [...].
- (f) The Cognis name, tradename, logo or any brand of BASF or Cognis.

Annex 1

The Hythe Site

1. The Hythe Site was built in early 1960s. The current equipment is modern and has been regularly upgraded and no production lines are considered obsolete.
2. The area covered by the Hythe Site is [...]. An aerial photograph and site plan are provided in *Appendix 1.1*.
3. The Hythe Site consists of the following manufacturing units:
 - [...]
4. The Hythe Site has the following non-manufacturing facilities and building:
 - [...]
5. The Hythe Site has all the required licenses, permits and authorizations for its full operation. [...]
6. The Hythe Site has significant spare capacity and significant capacity for expansion.
7. The Hythe Site holds a skilled employee base of approximately [...].
8. BASF will commit to work with the Purchaser to transfer the assets and other elements relating to the Contact Lens Materials business out of the Hythe Site [...].

Appendix 1.1.
Aerial photo and plan of the Hythe Site

[...]

Appendix 1.2.

Production flow and equipment charts for Hydroxy Methacrylates, Multifunctional Methacrylates, PAG and PAG-based Lubricants

[...]

Annex 2

Intangible Assets included the Divestment Business

A. Patents specific to Hydroxy Methacrylates

[...]

B. Trademarks specific to Hydroxy Methacrylates

[...]

C. [...] trademark used in other products manufactured at the Hythe Plant

[...]

D. Other intellectual property rights

[...]

The know-how related to Hydroxy Methacrylates will be transferred to the Purchaser as part of the Divestment Business.

Annex 3

Main permits and authorizations required for the operation of the Hythe Site

[...]

Annex 4

Main customers for Hydroxy Methacrylates, Multifunctional Methacrylates, Adducts and Other Products

BASF will transfer to the Purchaser customer lists for the Hydroxy Methacrylates, Multifunctional Methacrylates, Adducts and Other Products businesses. The top five customers for each of these product groups are listed below:

[...]

Annex 5

Suppliers of raw materials at the Hythe Site

[...]

Annex 6

Main contractors for services at the Hythe Site

A. Logistics

[...]

B. Other services

[...]

Annex 7

Personnel of the Divestment Business

A. Personnel and Key Personnel at the Hythe Site

1. In line with applicable employment laws and other relevant legislation, the Key Personnel and all other employees currently employed at the Hythe Site as at the date of Closing, [...]
2. At the date of signature of the Commitments, approximately [...] employees work at the Hythe Site. [...]
3. Personnel that are key to the operation of the site are listed in the Table below. The Personnel holding these key functions are stable, know the business and were, for most of them, already there at the time the Hythe Site was held separate following the acquisition by Degussa of Laporte (2001).

[...]

B. Employees outside the Hythe Site

4. [...]
5. [...] Cognis can estimate the resources that are likely to be needed after Closing of the Divestment Business to cover for the functions currently being carried outside of the Hythe Site (primarily in marketing, sales and distribution) and that would be, unless the Purchaser does not require them, made available to the Purchaser as part of the Divestment Business:

[...]

Appendix 7.1.

Organizational charts of the employees located at the Hythe Site

[...]