



EUROPEAN COMMISSION
DG Competition

***Case M.7777 - SOLVAY /
CYTEC***

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: 02/12/2015

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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 Where possible the information omitted has been replaced by ranges of figures or a general description.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

To the notifying party:

Dear Madam(s) and/or Sir(s),

**Subject: Case M.7777 – Solvay / Cytec
Commission decision pursuant to Article 6(1)(b) in conjunction with
Article 6(2) of Council Regulation No 139/2004¹ and Article 57 of the
Agreement on the European Economic Area²**

- (1) On 13 October 2015, the European Commission received a notification of a proposed concentration pursuant to Article 4 of Council Regulation (EC) No 139/2004³ by which Solvay S.A. ("Solvay", Belgium), hereinafter "the Notifying Party", acquires within the meaning of Article 3(1)(b) of the Merger Regulation control of the whole of Cytec Industries Inc. ("Cytec", United States) by way of purchase of shares (hereinafter "the Proposed Transaction" or "the Transaction").⁴ Solvay and Cytec are collectively referred to as the "Parties".

I. THE PARTIES AND THE OPERATION

- (2) Solvay is an international chemical group active in the research, development, production, marketing and sale of chemicals and plastics. Solvay is headquartered in Belgium.

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

² OJ L 1, 3.1.1994, p. 3 ("the EEA Agreement").

³ OJ L 24, 29.1.2004, p. 1 (the "Merger Regulation").

⁴ Publication in the Official Journal of the European Union No C 347, 20.10.2015, p. 11.

- (3) Cytec is a global specialty chemicals and materials company that develops and supplies value-added products including composite materials and adhesives to a wide range of industries such as aerospace, agriculture/agrochemical, defence and mining. Cytec is headquartered in the United States.
- (4) The Proposed Transaction consists of the acquisition by Solvay of 100% of the share capital of Cytec. Solvay will thereby have sole control over Cytec. Therefore the Proposed Transaction constitutes a concentration within the meaning of Article 3(1)(b) of the Merger Regulation.

II. UNION DIMENSION

- (5) The undertakings concerned have a combined aggregate world-wide turnover of more than EUR 5 000 million⁵ (Solvay: EUR 10 200 million, Cytec: EUR 1 511 million). Each of them has an EU-wide turnover in excess of EUR 250 million (Solvay: EUR [...] million, Cytec: EUR [...] million), 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 a Union dimension.

III. ASSESSMENT

- (6) The Proposed Transaction essentially concerns two sectors: mining chemicals where both Parties are active, and composite materials and adhesives where Cytec is active and which essentially gives rise to vertically affected markets, Solvay being a supplier of inputs.

III.1. MINING CHEMICALS

- (7) Mining chemicals are products used in the process of separating commercially valuable minerals from their ores. Depending on the ore, there are two main processing methods: solvent extraction (through hydrometallurgy) and froth flotation (by using flotation chemicals).⁶ The Proposed Transaction leads to horizontal overlaps in both areas.

III.1.1. Solvent extractants

III.1.1.1. Market definition

III.1.1.1.a. Product market

- (8) Solvent extractants are used to separate compounds based on their relative solubility in two different immiscible liquids (though the hydrometallurgy process).
- (9) Solvent extractants can be classified in the following different groups based on the underlying chemistry:
- i. Oximes: the largest group of solvent extractants, used e.g. for the extraction of copper.

⁵ Turnover calculated in accordance with Article 5 of the Merger Regulation and the Commission Consolidated Jurisdictional Notice (OJ C 95, 16.4.2008, p. 1).

⁶ Further processing methods exist, but they are not of relevance in the present case.

- ii. Tertiary amines: extractants based on amines are used e.g. for the extraction of uranium and heavy metals.
 - iii. Phosphor based solvent extractants, used for the extraction of cobalt from nickel (hereinafter "cobalt/nickel"), rare earths, zinc and some other metals.
- (10) Solvay and Cytec are both producing phosphor based solvent extractants for the extraction of cobalt/nickel. Cytec's product is marketed under the Cyanex 272 brand name, and Solvay's under Ionquest 290.
- (11) The Commission has previously analysed the solvent extractants market⁷ and considered that the solvent extractants formed a separate product market, distinct from other mining chemicals due to their different physical and chemical processes. The precise scope of the product market definition was left open.

Notifying Party's views

- (12) The Notifying Party submits that the market for solvent extractants could be further segmented based on the type of chemistry used.
- (13) The Notifying Party acknowledges that from a demand perspective, certain types of extractants chemistry are often more appropriate for a given type of ore. For example, amine based extractants are used for uranium processing and phosphor based solvent extractants for cobalt/nickel and rare earths. However, the Notifying Party considers that it would not be appropriate to further segment the market within a given chemistry per type of ore.
- (14) To support its claim, the Notifying Party submits that suppliers typically specialise by type of chemistry, rather than by type of ore. Once a supplier possesses the technology, access to inputs, equipment, production processes and expertise to produce a specific chemistry (oximes, tertiary amines or phosphor), it can easily supply the products for all types of ores using that chemistry.
- (15) Thus, for the purpose of this case, the Notifying Party submits that the relevant product market should be phosphor based solvent extractants.

Commission's assessment

- (16) On the basis of the market investigation, the Commission considers that from a supply perspective, there is limited substitution between the three chemistries based on which solvent extractants are manufactured (oximes, tertiary amines and phosphor).
- (17) Indeed, the investigation revealed that the production capabilities of suppliers are mainly driven by related chemistry, with companies specialising on a specific chemistry and then exploring the markets, or target ores, open to that chemistry.⁸

⁷ Case No M.5927 - BASF/Cognis, paragraph 317 and following.

⁸ Non –confidential minutes of a conference call; replies to questions 7 and 8 of RFI Q1-Competitors.

- (18) Furthermore, within a given chemistry, the investigation revealed that suppliers are specialised per type of metal and specific ore. A supplier indicated that the products are tailored based "*on ore and process used of metal recovery as well as presence of other undesired metal ions.*"⁹
- (19) In particular, production of phosphor based solvent extractants for cobalt/nickel takes place on a production line not shared with other phosphor based solvent extractants, and requires specific know-how and technology. Producers cannot easily switch their production process from one technology to another even if the products are based on the same chemistry.¹⁰
- (20) From a demand side perspective, the overwhelming majority of customers consider that apart from the underlying chemistry, solvent extractants are chemicals tailored to specific target ores and the metals/substances contained therein.¹¹ The selectivity of the extractant¹² is also mentioned as a key criterion for the customers' choice.¹³ A market player indicated that "*other minerals or metals present in the ore may make one extractant chemistry preferable or more selective than another.*"¹⁴
- (21) In addition, customers have identified the performance of a given solvent in the extraction of a specific metal as an important criterion for the choice of the solvent extractant within a specific class.¹⁵
- (22) Based on the above elements, it appears that there is limited supply and demand side substitution between solvent extractants based on the same chemistry but designed for the extraction of different metals from their ore.
- (23) Therefore, for the purpose of assessing this case and given the overlaps in the Parties' activities, the product market definition should be limited to phosphor based solvent extractants for cobalt/nickel.

III.1.1.1.b. Geographic market

- (24) The Commission previously considered that the market for solvent extractants is likely to be worldwide in scope. The exact scope of the relevant geographic market was ultimately left open.¹⁶

⁹ Non - confidential replies to question 11.1 of RFI Q1-Competitors.

¹⁰ Non –confidential replies to questions 17 and 18 of RFI Q1-Competitors.

¹¹ Non-confidential replies to question 7 of RFI Q2 –Customers.

¹² The selectivity of a solvent extractant is a measure of its capacity to effectively remove specific impurities (other metals) present in the ore. Extractants' selectivity varies mainly with their acidity.

¹³ Non-confidential reply to question 9 of RFI Q2 – Customers.

¹⁴ Non-confidential reply to question 11.1 of RFI Q1 – Competitors.

¹⁵ Non-confidential replies and to question 9 of RFI Q2 – Customers.

¹⁶ Case No M.5927 - BASF/Cognis, paragraph 321.

Notifying Party's views

- (25) The Notifying Party submits that the relevant geographic market for solvent extractants should be defined as worldwide in scope, since one of the key aspects of the mining industry is its international nature, implying that mining chemicals are produced and sold globally.

Commission's assessment

- (26) On the basis of the market investigation, the Commission has confirmed that the market for all phosphor based solvent extractants, including the ones used for cobalt/nickel extraction, is worldwide in nature.
- (27) First, suppliers of solvent extractants indicated that they compete on a worldwide basis.¹⁷
- (28) Second, although some customers indicated that price could be lower in Asia as compared to other regions, most of the market participants indicated that the price in the EEA is not substantially different compared to the price in other geographic areas.¹⁸
- (29) Third, whilst the transportation of phosphor based solvent extractants is subject to regulation, and specific requirements,¹⁹ there are no technical limitations as to the distance to which the product can be transported. Manufacturing facilities are mainly located in the EEA, North America and Asia, whereas customers are located across the globe. Therefore, there is no proximity between suppliers and customer location. Customers typically purchase solvent extractants individually for each production plant.²⁰ Transport costs depend on the value of different solvent extractants; nevertheless it represents a relatively small proportion of the total price of the product.²¹
- (30) Based on the above, the Commission considers that for the purpose of assessing this case, the market for phosphor based solvent extractants used in the separation of cobalt from nickel is global in scope.

III.1.1.2.Competitive assessment

- (31) The Notifying Party's best estimate indicates that the merged entity in 2014 had a combined market share of [70-80]% ([50-60]% for Cytec and [10-20]% for Solvay) in value in the worldwide market for phosphor based solvent extractants for cobalt/nickel of EUR [10-15] million.

¹⁷ Non - confidential replies to question 21 of RFI Q1-Competitors.

¹⁸ Non - confidential replies to question 21 of RFI Q2-Customers and question 23 of RFI Q1-Competitors.

¹⁹ The phosphor-based solvent extractants are classified as Dangerous Goods Class 9, under the Packing Group III UN 3082 Marine Pollutant (according to MSDS). This regulation requires specific conditions for its transportation.

²⁰ Non - confidential replies to question 20 of RFI Q2-Customers.

²¹ Non - confidential replies to question 23- 25 of RFI Q1-Competitors, Non - confidential replies to question 19 of RFI Q2-Customers.

- (32) The Notifying Party submits that Solvay and Cytec are competing on this market against Chinese companies, although there was no reliable market data to allocate the sales to specific companies.

Table 1 – The Parties' market shares in the worldwide market of phosphor based solvent extractants for cobalt/nickel (2012-2014)²²

	2014		2013		2012	
	Value	Volume	Value	Volume	Value	Volume
Cytec	[50-60]%	[40-50]%	[60-70]%	[40-50]%	[50-60]%	[20-30]%
Solvay	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[20-30]%
Combined	[70-80]%	[40-50]%	[70-80]%	[60-70]%	[60-70]%	[40-50]%
Chinese suppliers	[20-30]%	[40-50]%	[20-30]%	[30-40]%	[30-40]%	[50-60]%
Total	100%	100%	100%	100%	100%	100%

- (33) On the basis of the market investigation, the Commission has confirmed the high combined market shares of the Parties, with Cytec leading the market. The market investigation also revealed that two Chinese companies are active in phosphor based solvent extractants for cobalt/nickel market, namely Jiangxi Xinxin with its product Sinophos 272 and Xinte with its product APT 65000.²³

Notifying Party's views

- (34) The Notifying Party submits that the Parties' products compete closely with those of the two Chinese companies Jiangxi XinXin and Xinte, which have recently entered the market and are producing chemically identical products to Cyanex 272. The Notifying Party also considers that [...]’s product ([...]) is a closer competitor to Cytec’s product (Cyanex 272) because both are produced through a [...] process, while Solvay’s product (Ionquest 290) is manufactured through a [...] process and presents a lower level of impurities.
- (35) To illustrate this alleged competitive pressure, the Notifying Party refers to Cytec having lost [...] customers to [...] since 2012 and submits that the price offered by this company is comparable to lower than the price offered by Cytec and Solvay.
- (36) Furthermore, the Notifying Party considers that barriers to entry are low for manufacturers that are already active in phosphor based chemistry, since all important intellectual property rights previously owned by Cytec have expired. In particular, the Notifying Party submits that the merged entity will face competitive pressure from companies active in the production of phosphor based extractants for rare earths which would be able to start manufacturing cobalt nickel extractants with comparatively modest capital investment. Also, some of the solvent extractants currently used in rare earths could already be used by some customers to separate cobalt from nickel.

²² Source: Form CO, the calculation is based on the best estimates of the Notifying Party.

²³ Non-confidential reply to question 24 of RFI Q2-Customers and non-Confidential reply to question 27 of RFI Q1-Competitors.

- (37) The Notifying Party also submits that the worldwide market for phosphor based solvent extractants for cobalt/nickel is very small, estimated at EUR [...] million in 2014. The Parties' combined sales worldwide amount to EUR [...] million, with an increment of EUR [...] million brought by Solvay. In the EEA, the combined sales of the Parties amounted to approximately EUR [...] million, with a *de minimis* increment of EUR [...] brought by Solvay. The Notifying Party also submits that a large proportion of the sales of phosphor based solvent extractants for cobalt/nickel takes place not in the EEA but in China, where the bulk of the world global refining has taken place in recent years.
- (38) In addition, the Notifying Party submits that buyers of the product are large international and sophisticated mining companies with significant bargaining power that could support expansion or entry of Chinese suppliers directly or via service companies or distributors.
- (39) Based on the above, the Notifying Party submits that the Proposed Transaction will not lead to a significant impediment of effective competition in the EEA.

Commission's assessment

- (40) On the basis of the market investigation, the Commission cannot confirm the Notifying Party's arguments.
- (41) First, the market investigation showed that Cytec's Cyanex 272 and Solvay's Ionquest 290 are each other's closest competitors. More specifically, the overwhelming majority of the customers consider them to be each other's closest alternatives in terms of quality and product consistency, which were ranked as the two most important criteria, before price, for the selection of a supplier.²⁴ Solvay's Ionquest 290 has been qualified by customers as the "*second best*", "*closest*"/"*most likely*"/"*most credible*" alternative supplier or even as the "*only alternative*" to Cytec's Cyanex 272.²⁵
- (42) Second, the market investigation has also revealed that Solvay's Ionquest 290 is a relatively recent market entrant, which has already put significant competitive pressure on Cytec's Cyanex 272. Indeed, Solvay's Ionquest 290 entered the market in 2006, while Cytec's Cyanex 272 is the only product available since the 1980s. There are examples of customers switching from Cyanex 272 to Ionquest 290 and of other customers leveraging the possibility to switch in their price negotiations with Cytec.²⁶
- (43) Third, contrary to the Notifying Party's submission, the Chinese producers Jiangxi Xinxin and Xinte are not perceived by customers as offering sufficiently reliable and qualitative alternatives. Indeed, many customers and competitors qualified Solvay and Cytec's products as being of good quality and reliable, while quality was identified as a weakness for the Chinese suppliers.²⁷ The market investigation

²⁴ Non-confidential replies to question 30 of RFI Q2-Customers.

²⁵ Non-confidential replies to question 31 of RFI Q2-Customers.

²⁶ Non-confidential version of the minutes of conference calls with customers on 9 November 2015 and on 10 November 2015.

²⁷ Non-confidential replies to question 28 of RFI Q1-Competitors and question 25 of RFI Q2-Customers.

also provided examples of customers who tested these products in a pilot unit of its manufacturing facilities but revealed that the product consistency and quality characteristics were insufficient to further test the products on an industrial scale.²⁸

- (44) The "quality concerns"²⁹ identified during the market investigation are also evidenced by the fact that, even if their products are priced competitively,³⁰ Chinese suppliers have not significantly gained market share over the past years. Furthermore, neither Jiangxi Xinxin nor Xinte are active in Europe, where Cytec and Solvay are the only suppliers. Cytec and Solvay also appear to have the most efficient channels to the market, as Cytec is selling Cyanex 272 directly and Solvay is selling Ionquest 290 through SNF Flomin which is a well-known and recognized distributor in this industry.
- (45) Fourth, as to barriers to entry, the Commission, on the basis of the market investigation, has not confirmed the Parties' argument that suppliers active in other phosphor-based solvent extractants could easily enter the market. Indeed, because of the small size of the market, suppliers appear reluctant to invest in this field. More importantly, the market investigation identified the limited ability for customers to switch as an important barrier to entry. Indeed, customers have limited possibilities to switch supplier due to the need to go through a complex technical assessment and feasibility studies. Some of them highlighted significant sunk costs linked to the disposal of the stock of solvent extractants in case of a switch to a competing product.³¹
- (46) Fifth, because of the reasons detailed above, many customers and competitors expressed concerns that post-Transaction, the merged entity will have the ability and the incentives to increase the price for solvent extractants for cobalt/nickel.
- (47) Sixth, there is no *de minimis* rule in the Merger Regulation according to which below a certain market size, a price increase would be considered to have an immaterial impact on competition.
- (48) The limited refinery activities in the EEA are irrelevant to assess the impact in the EEA since the relevant geographic market is global. A price increase on the extraction of cobalt would inevitably impact the EEA, for the price of cobalt but also for its end uses, in particular in rechargeable batteries.
- (49) Seventh, during the market investigation, European customers expressed concerns as to a possible price increase for phosphor based solvent extractants for cobalt/nickel in the EEA.³²

²⁸ Non-confidential version of the minutes of conference calls with customers on 9 November 2015 and on 10 November 2015.

²⁹ Non-confidential reply to question 28 of RFI Q1-Competitors.

³⁰ The overwhelming majority of customers identified price as a weakness for Cytec and Solvay's products or a strengths of the Chinese suppliers (Q2-Customers, question 25). [...].

³¹ Non-confidential replies to questions 32-35 of RFI Q2-Customers.

³² Non-confidential replies to question 29 of RFI Q2-Customers.

- (50) Finally, customers are indeed large mining and refining companies. However, the investigation brought no indication that they would be able to exert countervailing buyer power. The product in question is necessary for the production of cobalt, and there are no alternative products that could be efficiently used for the same purpose. Customers are highly concerned about product quality and consistency. Their only possibility would be to accommodate to a price increase, in case the existing competition between Cytec and Solvay disappears. Furthermore, customers would have neither the ability nor the incentive to integrate vertically or to support the expansion of alternative producers of cobalt/nickel solvent extractants. The manufacturing of solvent extractants for cobalt/nickel requires very specific knowledge of the relevant chemistry, which large mining and refining companies do not possess. In any event, the volume of demand from each customer (even the bigger ones) would not justify the investment needed to start manufacturing the product or to sponsor entry.
- (51) Based on the above, the Commission concludes that the Proposed Transaction will lead to the elimination of an important competitive force in the market for phosphor based solvent extractants for cobalt/nickel, and therefore raises serious doubts as to its compatibility with the internal market.

III.1.2. Flotation Frothers

III.1.2.1. Market definition

III.1.2.1.a. Product market

- (52) Froth flotation is a method used to physically separate particles based on differences in the ability of air bubbles to selectively adhere to specific mineral surfaces in mineral/water slurry. The froth flotation method relies on froth flotation chemicals which include: specialty chemicals such as frothers³³ and collectors,³⁴ and more commoditised chemicals such as processing aids and flocculants.
- (53) Cytec commercialises the whole range of froth flotation chemicals, including both collectors and frothers, whereas Solvay is only active in frothers.
- (54) Common types of frothers used in the process are: methyl isobutyl carbinol (MIBC), pine oil, alcohols and glycol esters chemistries. Cytec produces frothers based on alcohol and glycol, whereas Solvay produces and sells frothers based on MIBC.

Notifying Party's views

- (55) The Notifying Party submits that the market for frothers should not be further segmented based on the underlying chemistry, since most types of frothers can be used interchangeably from a demand side perspective.
- (56) The Notifying Party also submits that from the supply side perspective frothers tend to be blends of raw materials and by-product streams that are sourced from

³³ Frothers are liquids that produce the froth or foam on which the flotation process depends.

³⁴ Collectors are chemicals used for separating hydrophobic (water-fearing) materials from hydrophilic. This water-repellent film facilitates the attachment of the mineral particle to the air bubble.

various suppliers. Hence, a supplier can easily switch from supplying one particular type of frother to another, by switching its source of supply. In addition, the type of frother is not dependent on the mineral subject to extraction.

Commission's assessment

- (57) The Commission has not previously analysed the market for froth flotation chemicals, to which frothers belong.
- (58) The market investigation indicated that the four categories of flotation chemicals, frothers, collectors, processing aides and flocculants, are not part of the same product market.³⁵ Some suppliers suggested a first distinction based on the function of these chemicals in the flotation process, segmenting between froth flotation chemicals, comprising frothers and collectors, and dewatering chemicals, comprising flocculants and processing aids. Based on supply side and demand side consideration, it also appears that frothers and collectors should be considered as separate relevant markets.
- (59) First, on the basis of the market investigation, the Commission has confirmed that there is no supply side substitutability between frothers and collectors.³⁶ Frothers and collectors are manufactured on very different production lines and require different technical expertise. Suppliers cannot easily and within a short period of time accommodate their production process and switch the production from frothers to collectors and *vice-versa*.³⁷ Also, raw material for frothers are produced from petrochemical feedstock, whereas collectors are all synthesized chemicals.³⁸
- (60) Second, from a demand side perspective, customers do not use frothers and collectors interchangeably, since they perform different functions in the froth flotation process. Further the choice of a frother is not really chemistry driven, but rather based on the selectivity (i.e. the ability to selectively separate the target mineral from other minerals contained in the ore), its performance, and price.³⁹
- (61) The market investigation also revealed that it would not be appropriate to subdivide the market for frothers by underlying chemistry. Indeed, as opposed to solvent extractants, customers of frothers consider frothers based on different chemistries, such as MIBC, pin oil, various alcohols and glycol/polyglycols ethers as substitutable.⁴⁰
- (62) However, ultimately, the precise scope of the product market definition can be left open for the purpose of the present case, since no serious doubts as to the compatibility of the Transaction with the internal market arise whatever the exact product market definition.

³⁵ Non-confidential replies to question 48 of RFI Q1-Competitors.

³⁶ Non-confidential replies to question 49 of RFI Q1-Competitors. Non-confidential replies to question 43 of RFI Q2-Customers.

³⁷ Non-confidential replies to question 53 of RFI Q1-Competitors.

³⁸ Non-confidential reply to question 48 of RFI Q2-Customers.

³⁹ Non-confidential replies to question 43 of RFI Q2-Customers.

⁴⁰ Non-confidential replies to question 49 of RFI Q2-Customers.

III.1.2.1.b. Geographic market

(63) The Commission has not previously analysed the geographic market for frothers.

Notifying Party's views

(64) The Notifying Party submits that the geographic market should be considered as worldwide.

Commission's assessment

(65) The market investigation revealed a number of cases where there is proximity between the manufacturing location for frothers and the customers' location.⁴¹ Some market players stressed the fact that frothers are considered as hazardous substances and their transportation is subject to specific requirements, such as specialized railcars and marine vessels.⁴² Even if half of the suppliers indicated that they transport frothers globally and supply them to customers on a worldwide basis,⁴³ other suppliers indicated that competition for frothers takes place at the level of macro areas.⁴⁴

(66) Further, it appears that there is limited price difference between frothers sold in the EEA and other geographic areas, such as North America, South America and Asia.

(67) For the purpose of assessing this case, whilst the geographic market for frothers is at least EEA wide, or possibly wider, the precise geographic market definition can be left open since no serious doubts as to the compatibility of the Transaction with the internal market arise whatever the precise geographic market definition for frothers.

III.1.2.2. Competitive assessment

(68) Within the overall category of flotation chemicals, the Parties' activities overlap in relation to frothers only.

(69) On a worldwide market for frothers, based on the Notifying Party's estimate, the Parties' combined market share was slightly above [10-20]%⁴⁵ in value with an increment of [5-10]% attributable to Solvay in 2014.

⁴¹ Non-confidential replies to question 64.1 of RFI Q1-Competitors.

⁴² Non-confidential replies to question 51-52 of RFI Q2-Customers. Non - confidential replies to question 60 of RFI Q1-Competitors.

⁴³ Non-confidential replies to question 54 of RFI Q2-Customers.

⁴⁴ Non-confidential replies to question 61.1 of RFI Q1-Competitors.

⁴⁵ The market would not be affected based on market share in volume: [10-20]% combined, with an increment of [0-5]% for Solvay in 2014.

**Table 2 – The Parties' worldwide market shares in frothers (volume and value) for the period
2014 - 2012)⁴⁶**

	2014		2013		2012	
	Value	Volume	Value	Volume	Value	Volume
Cytec	[10-20]%	[5-10]%	[10-20]%	[5-10]%	[10-20]%	[5-10]%
Solvay	[5-10]%	[0-5]%	[5-10]%	[0-5]%	[5-10]%	[0-5]%
Combined	[20-30]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%

(70) Should the market be considered as EEA-wide, the Proposed Transaction did not lead to a horizontal overlap in 2014 and 2012, since Solvay did not sell frothers in these years. Solvay did sell frothers in the EEA in 2013. However, the combined market share of the Parties was below [10-20]% in 2013.⁴⁷

Notifying Party's views

(71) The Notifying Party submits that post-transaction, the market for frothers will remain competitive since the combined market share of the Parties is limited and there are a number of competing producers, including BASF, Celanese, Dow Chemical, Flottec, Huntsman, LYC Chemical Corporation, Mitsui, Nalco and Shell.

Commission's assessment

(72) On the basis of the market investigation, the Commission has confirmed that the Parties will continue to face competition from major suppliers of frothers post-Transaction.

(73) First, the Parties' market shares are limited and none of them has a particular advantage in this market. Furthermore, the Parties are not perceived as close competitors by the vast majority of the customers, even though some of them identified Solvay's product as a close substitute to Cytec to be used in their manufacturing process.⁴⁸

(74) Second, the Commission has also confirmed that there will be multiple other market players, such as BASF, Dow and Clariant.⁴⁹

(75) Neither competitors nor customers consider that the proposed transaction would have a negative impact on the market for frothers and more generally on the market for flotation chemicals in the EEA or on a worldwide market.

(76) One market participant however highlighted that Cytec has an important portfolio of mining chemicals, including both frothers and collectors which would generally be purchased together by customers, and that this should be taken into account in the competitive assessment of the Transaction.

⁴⁶ Source: Form CO, the market data is based on the HIS Chemical update "Mining Chemicals" and the Parties own data.

⁴⁷ Source: Notifying Party's submission.

⁴⁸ Non-confidential replies to question 59 of RFI Q2-Customers.

⁴⁹ Non-confidential replies to questions 65 and 65.1 of RFI Q1-Competitors.

- (77) On the basis of the results of the market investigation, the Commission considers that the Transaction will not lead to any conglomerate effect resulting from Cytec's activities in collectors.
- (78) First, as indicated in the replies to the market investigation, competitors generally do not sell collectors and frothers in a bundle.⁵⁰ A competitor revealed that there is no competitive advantage to sell products as a bundle. Another competitor further clarified that *"the final choice of flotation reagents is based on performance. Offering both frothers and collectors does not guarantee that the products will meet the requirements of the customer. As such, the companies offering both collectors and frothers have a certain benefit but not a distinctive competitive advantage."*⁵¹
- (79) Second, the majority of customers and competitors indicated that customers are free to *"mix and match"* frothers and collectors, based on their needs. This is evidenced by the fact that some suppliers, such as Solvay, are active only in one type of chemicals.⁵²
- (80) Finally, while Cytec's position in collectors only remains limited based on the Notifying Party's best estimate (market share of approximately [20-30]% by volume and [10-20]% by value in 2014), other market players, such as BASF and Flottec, already supply both frothers and collectors.
- (81) Based on the above, the Commission considers that the Proposed Transaction does not raise serious doubts as to its compatibility with the internal market in relation to frothers and more generally in relation to flotation chemicals.

III.2. COMPOSITE MATERIALS AND ADHESIVES

- (82) The Transaction creates a number of vertically affected markets due to Solvay's activities as a producer of chemicals and Cytec's downstream activities in composite materials and adhesives.
- (83) The Transaction also gives rise to a horizontally affected market in the possible market for Polyetherether ketone (PEEK) and polyether ketone ketone (PEKK) films and sheets for the aircraft industry.

III.2.1. Vertically affected markets

III.2.1.1. Market definition

III.2.1.1.a. Solvay's upstream activities

- (84) The chemicals produced by Solvay which give rise to vertically affected markets are the following: Hydroquinone (HQ), polyethersulfone (PES), polyamide-imide (PAI) and PEEK.

⁵⁰ Non-confidential replies to question 50 and 50.1 of RFI Q1-Competitors.

⁵¹ Non-confidential reply to question 51 of RFI Q1-Competitors.

⁵² Non-confidential reply to question 45 of RFI Q2-Customers.

- (85) PES, PAI and PEEK are part of Solvay's portfolio in thermoplastic polymers, which are materials that become pliable or mouldable above a specific temperature and solidify upon cooling.

III.2.1.1.a.i. Hydroquinone (HQ)

Relevant product market

- (86) HQ is a type of diphenol used in a variety of applications, mainly as an additive in the manufacture of acrylic monomers and as antioxidant building blocks for food and tyres. Further applications include photographic developers and in agrochemicals.
- (87) In a previous decision, the Commission considered HQ to be part of a possible distinct product market,⁵³ but the precise market definition was ultimately left open.
- (88) The Notifying Party submits that HQ should be seen as a separate product market.
- (89) In this case, the precise product market definition can be left open since no serious concerns as to the compatibility of the Transaction with the internal market arise under any of the plausible product market definitions.

Relevant geographic market

- (90) In a previous decision, the Commission considered the relevant geographic market for HQ could be worldwide in scope, but ultimately left this open.⁵⁴
- (91) The Notifying Party submits that the geographic market for HQ is worldwide. The Notifying Party indicates that all main suppliers of HQ are active on a global scale, that transport costs are not sufficiently high so as to prevent worldwide trade and that the price of HQ is substantially uniform worldwide. Indeed, the Notifying Party estimates that 46% of global merchant (i.e. non-captive) demand for HQ is provided across continents.
- (92) In this case, the geographic scope of the market for HQ can be left open, given that no concerns arise under any plausible geographic market definition.

III.2.1.1.a.ii. Polyethersulfone (PES)

Product market definition

- (93) PES is a high temperature amorphous polymer (a subset of high temperature resistant polymers). Their amorphous nature is determined by their crystalline structure and they differ from other polymers by their temperature stability, but also by their chemical and dimensional stability, mechanical properties, production quantities and price.
- (94) PES belongs to the family of sulfone polymers together with polysulfone (PSU) and polyphenylsulfone (PPSU). This is a family of engineering thermoplastic

⁵³ Case No M.6230 - Solvay/Rhodia, paragraph 33 and following.

⁵⁴ Case No M.6230 - Solvay/Rhodia, paragraph 37.

polymer characterised by the presence of a sulfone. PES is suitable for highly demanding applications such as membranes for haemodialysis and water treatment, automotive lighting applications, aerospace industry etc.

- (95) It is possible to produce PES with reactive end groups (rPES). rPES has reactive groups that adhere to surfaces or other molecules in a matrix. rPES has lower degradation temperatures compared to regular PES which means that it cannot be used in extrusion or injection moulding applications. The only two applications for rPES today are tougheners for thermoset composites and binding agents for non-stick coatings (cook ware).
- (96) The Commission has not previously analysed the market for PES.
- (97) The Notifying Party considers that the relevant product market for the purpose of this notification is PES. The Notifying Party submits that each of the sulfone polymer sub-classes, PES, PSU and PPSU have unique properties which make each sub-class or molecule suitable for specific applications.
- (98) The Notifying party further submits that rPES can be produced using the same production equipment as for regular PES. In light of the supply-side substitutability between PES and rPES, the market for PES should not be further segmented.
- (99) The Commission considers that the question of whether PES form part of a separate market, different from PSU and/or PPSU, and whether rPES should be distinguished from other PES can be left open for the purpose of the present case given that the Transaction does not raise serious doubts as to its compatibility with the internal market under any plausible product market definition.

Geographic market definition

- (100) The Notifying Party submits that the market for PES is worldwide. The main suppliers are active globally, transport costs amount to [0-5]% of the selling price and the price of PES is substantially uniform worldwide.
- (101) The Commission considers that for the purpose of this case, the precise scope of the geographic market definition can be left open since the Transaction does not raise serious doubts as to its compatibility with the internal market under any plausible geographic market definition.

III.2.1.1.a.iii. Polyamide-imide (PAI)

Product market definition

- (102) Polyamide-imides (PAI) are thermoplastic, amorphous polymers that have exceptional mechanical, thermal and chemical resistant properties.
- (103) The Commission has previously analysed various types of polyamide-based chemicals, however PAIs have not been analysed so far.⁵⁵

⁵⁵ Case No M.994 - DuPont/Hitachi (a market for liquid polyimide), Case No M.4737 - Sabic/GE Plastics (a market for PEI), Case No M.7465 - Arkema/Bostik (polyamide powders).

- (104) The Notifying Party submits that PAI belongs to a broader product market of polyimides (PI) comprising a wider family of thermoplastic high-temperature resistant polymers. The Notifying Party further submits that from a supply perspective, assets that are used to make PIs can generally be used to make PAIs. From a demand perspective, PAIs compete with other PIs for different applications, including for moulding applications, and for coatings and adhesives. Although there are certain differences in the characteristics of the products and in the way in which they are processed, PAIs and PIs are often regarded by customers as functional substitutes with one product selected over the other based on performance, design and processing considerations.
- (105) The Notifying Party further submits that the market for PAIs should not be segmented on the basis of production process i.e. mic-acid versus diisocyanate-based PAIs.
- (106) For the purpose of this case, the precise scope of the relevant product market definition can be left open since the Transaction does not raise serious doubts as to its compatibility with the internal market under any plausible product market definition.

Geographic market definition

- (107) The Commission has not analysed the geographic market for PAIs in previous decisions. It has, however, analysed other types of polyamide based products. The Commission has looked at the market for liquid polyimide, which was considered as being at least Western Europe,⁵⁶ and for polyamide powders, which was considered as at least EEA-wide. However the geographic market was left open in both cases.
- (108) The Notifying Party submits that that the geographic market for PIs and/or PAIs is global. PAIs and PIs are produced and traded worldwide. There are no significant regulatory barriers to trade and transport costs are insignificant compared to the end price of the product.
- (109) For the purpose of this case, the precise scope of the relevant geographic market can be left open since the Transaction does not raise serious doubts as to its compatibility with the internal market under any plausible geographic market definition.

III.2.1.1.a.iv. PEEK

- (110) Polyether ether ketone (PEEK) is a colourless organic thermoplastic polymer resin used in engineering applications.
- (111) PEEK is regarded as one of the highest performing thermoplastics, offering mechanical strength and dimensional stability, chemical resistance (e.g. to organics, acids and bases), high temperature performance, hydrolysis resistance and electrical performance.
- (112) There are no previous Commission decisions in which the markets for PEEK were considered.

⁵⁶ Case No M.994 - Dupont/Hitachi (a market for liquid polyimide), paragraph 22.

- (113) The Notifying Party submits that PEEK should be treated as the relevant product market, in particular taking into account the particular production process (requiring production assets [...]) and the fact that customers would clearly distinguish PEEK from other, related high performance thermoplastic polymers, in particular polyether ketone ketone (PEKK). According to the Notifying Party, PEEK and PEKK are generally not substitutable as they are produced via different chemistries using distinct production assets and are used by customers for different types of applications.
- (114) For the purpose of this case, the precise scope of the relevant product market can be left open since the Proposed Transaction does not raise serious doubts as to its compatibility with the internal market under any plausible product market definition.

Geographic market definition

- (115) Solvay submits that the relevant geographic market for PEEK is worldwide. The Notifying Party contends that the price is similar in the different regions of the world and the products can be easily transported, with transport costs representing only a fraction of the product price. On average, transport costs amount to [0-5]% of the product price.
- (116) In the Notifying Party's views, the global nature of the market is also illustrated by the fact that the existing players active in PEEK supply the global market from a limited number of production facilities: Solvay produces PEEK at its manufacturing facility in Panoli (India), Victrex supplies the market from its production site in Thorton Cleveleys (UK) and Evonik's production is located in in Changchun (China). Finally, there are a few Chinese players active in the production and supply of PEEK at various Chinese factories which supply primarily the market in China with only trivial exports to the EEA, North America and other countries.
- (117) For the purpose of this case, the precise scope of the relevant geographic market can be left open since the Transaction does not raise serious doubts as to its compatibility with the internal market under any plausible product market definition.

III.2.1.1.b. Cytec's downstream activities

- (118) Cytec's activities which give rise to vertically affected markets are prepregs and aerospace film and paste adhesives.

III.2.1.1.b.i. *Prepregs*

Product market definition

- (119) Advanced composite materials (also called prepregs) consist of resins in combination with fibres of various types, which Cytec sells for primary and secondary structures in the aerospace industry and in the automotive industry.
- (120) The term prepregs stands for pre-impregnated advanced composite materials, which are a form of advanced composite materials. Prepregs are composed of two key inputs, namely fibre and resin. Fibre acts as the reinforcement material in a prepreg. Several different types of fibre can be used for prepregs, e.g. carbon, glass, and aramid, each displaying different physical characteristics. Typical resin types

that are used for prepreg are epoxy, phenolics, bismaleimide and/or cyanate ester resins and thermoplastics.

- (121) Advanced composite materials are replacing conventional metal materials such as aluminium and steel in the manufacture of components in a growing number of applications, including (i) military and civil aerospace applications, (ii) industrial applications, including automotive components, and (iii) recreational applications (including skis and tennis racquets).
- (122) The Commission has previously considered a relevant product market for prepregs,⁵⁷ including possible sub-segmentations, but left the exact product market definition open. Amongst others, the Commission assessed the following possible segmentations: (i) prepregs for the aerospace industry and (ii) prepregs for the automotive industry. The Commission also considered the following additional, hypothetical sub-segmentations for aerospace prepregs: (i) prepregs for interiors in the aerospace industry, (ii) prepregs for primary structures in the aerospace industry, and (iii) prepregs for secondary structures in the aerospace industry. In the automotive segment, the Commission considered the following additional, hypothetical segments (i) prepregs for racing cars (e.g. Formula One) and (ii) prepregs for other automotive applications.
- (123) The Notifying Party generally agrees with the market definition the Commission considered in previous cases, and proposes that the exact product market definition be left open in the present case. The Notifying Party also stresses that the market may have evolved further given that by now cars based on composite materials have been launched commercially.
- (124) The Commission considers that for the purpose of this case, the precise scope of the relevant product market definition can be left open since the Proposed Transaction does not raise serious doubts as to its compatibility with the internal market under any plausible geographic market definition.

Geographic market definition

- (125) The Notifying Party submits that the geographic scope of the market for the supply of prepregs is worldwide. In the Notifying Party's view the largest prepreg suppliers operate globally, manufacturing at multiple plants around the world and selling to customers throughout the world, transport costs are insignificant as a proportion of the product value and are typically included in the contract price. Moreover, the Notifying Party submits that prepreg prices do not vary significantly by region.
- (126) In its previous decision in this area, the Commission considered both an EEA-wide market and a world-wide market.⁵⁸
- (127) For the purpose of this case, the precise scope of the relevant product market definition can be left open since the Proposed Transaction does not raise serious doubts as to its compatibility with the internal market under any plausible geographic market definition.

⁵⁷ Case No M.6561 - Cytec Industries/Umeco, paragraphs 21 to 32.

⁵⁸ Case No M.6561 - Cytec Industries/Umeco, paragraphs 21 to 32.

III.2.1.1.b.ii. Aerospace film and paste adhesives

Product market definition

- (128) The Commission has previously considered that the following adhesives are part of a distinct product market: (i) film adhesives, (ii) paste adhesives, (iii) sealants, and (iv) potting compounds, due to a limited demand side substitutability.⁵⁹ The Commission considered further segmentations of the adhesives market by application and has identified a segment for industrial adhesives used in the aerospace industry.⁶⁰
- (129) Notifying Party submits that the narrowest possible relevant product markets are the markets for aerospace film and aerospace paste adhesives.
- (130) For the purpose of this case, the precise scope of the relevant product market can be left open since the Transaction does not raise serious doubts as to its compatibility with the internal market under any plausible product market definition.

Geographic market definition

- (131) In its previous decision in this area, the Commission considered that the markets for adhesives for the aerospace and automotive industries are at least EEA-wide.⁶¹
- (132) The Notifying party considers that the markets for film and paste aerospace adhesives are global or at least EEA-wide, since these products are sold to large, multi-national customers who source globally from the adhesive manufacturers. The adhesives are transported over long distances at negligible costs and there are no meaningful price differences for aerospace adhesives between different regions in the world.
- (133) For the purpose of this case, the precise scope of the relevant geographic market can be left open since the Transaction does not raise serious doubts as to its compatibility with the internal market under any plausible market definition.

III.2.1.2. Competitive assessment

III.2.1.2.a. HQ/KM Polymer/Prepregs

- (134) The Transaction creates a vertical link between HQ, produced by Solvay, which is used as an intermediary product (toughening agent) for the production of KM Polymer which in turn is an input for the production of prepregs.

The Parties' market position

- (135) On the upstream market, Solvay's market share in HQ worldwide market was [30-40]% (EEA: [40-50]%) in 2014 and it has been decreasing since 2012. Other important competitors are active in this market, such as Mitsui ([20-30]%,

⁵⁹ Case No M.6561 - Cytec Industries/Umeco, paragraphs 38 and following.

⁶⁰ Case No M.3612 - Henkel/Sovereign, paragraphs 19 and 20.

⁶¹ Case No M.3612 - Henkel/Sovereign, paragraphs 37 and following.

EEA: [20-30]%), Eastman ([20-30]%, EEA: [10-20]%), and Camlin ([5-10]%, EEA: [0-5]%).

- (136) The table below provides an overview of Cytec's market position in the possible permutations of the relevant downstream affected product markets for prepregs.

Table 3 – Market shares in affected markets at worldwide and EEA levels of Cytec and its most important competitors in prepregs 2014 (value)⁶²

	All aerospace applications	Aerospace interiors	Aerospace secondary structures	
	Worldwide	Worldwide	Worldwide	EEA
Cytec	[30-40]%	[30-40]%	[40-50]%	[30-40]%
Hexcel	[30-40]%	-	[50-60]%	[60-70]%
Toray	[10-20]%	-	-	-
Gurit	-	[30-40]%	-	-
Barraday	-	[10-20]%	-	-
Others	[5-10]%	[20-30]%	[0-5]%	[0-5]%
Total	100%	100%	100%	100%

- (137) Cytec's purchases represent a very small proportion of the total HQ volumes traded globally ([0-5]%) and Solvay's sales to Cytec account for less than [0-5]% of Solvay's total worldwide sales of HQ.

Input foreclosure

- (138) With a market share slightly above [30-40]% world-wide, and considering the presence of other important competitors, Solvay's will not have the ability to engage in input foreclosure strategies as a consequence of the Transaction, since customers will have the possibility to purchase HQ from several other reliable suppliers active in this market. Furthermore, Solvay would in any event be unlikely to have an incentive to supply HQ only to Cytec, given that it would have to forgo the lion's share of its current sales.

Customer foreclosure

- (139) Customer foreclosure could only occur if the merged entity would be able to reduce its competitors' ability or incentive to compete in the upstream market by foreclosing access to a sufficiently important customer base. Since Cytec is a marginal customer of HQ, such scenario is highly unlikely.
- (140) Based on the above, the Commission considers that the Transaction does not raise serious doubts as to its compatibility with the internal market regarding this vertical relationship.

III.2.1.2.b. PES/Prepregs

- (141) Solvay produces and supplies PES, which Cytec purchases in limited volumes. Cytec also purchases PES from BASF and Sumitomo. Cytec uses PES for the production of a polymer integrated into advanced composite materials also called prepregs.

⁶² Source: Form CO, the figures are based on Solvay's estimates and its own internal commercial assessment.

The Parties' market position

- (142) In the PES market, Solvay has a market share of only [10-20]% globally and in the EEA, and other strong and long established competitors are present. In particular, BASF is by far the largest supplier of PES on the market, with a market share of [70-80]% worldwide and [80-90]% in the EEA (by volume). Sumitomo is also active with a market share of [10-20]% worldwide and [0-5]% in the EEA.
- (143) Based on a further segmentation of the PES market, giving rise to a hypothetical narrower market segment for rPES, Solvay's market share is lower, at [5-10]% worldwide and [5-10]% in the EEA. On this hypothetical market segment, Sumitomo is by far the largest supplier.
- (144) The market position of Cytec in the supply of prepregs has been presented in the previous section. In 2014, the total volume of PES that Cytec purchased from the three suppliers amounts to [...] kT. This corresponds to [0-5]% of Solvay's total supplies of PES.

Input foreclosure

- (145) In terms of a possible input foreclosure regarding the access to PES, the merged entity will not have the ability to foreclose access to PES, due to the small market share of Solvay in this market. Moreover, the merged entity is highly unlikely to have an incentive to foreclose other users from access to rPES given that even if the merged entity were to take over the volumes of rPES currently supplied by Sumitomo and BASF to Cytec, Cytec's total rPES requirements only represent approximately [0-5]% of Solvay's total PES supplies in 2014. Solvay would have to forgo the large majority of its current sales if it wanted to stop supplying other customers than Cytec.

Customer foreclosure

- (146) The merged is highly unlikely to have the ability or the incentive to engage in customer foreclosure strategies in the downstream market for prepregs.
- (147) Customer foreclosure could only occur if the merged entity were able to reduce its competitors' ability or incentive to compete in the upstream market by foreclosing access to a sufficiently important customer base. In 2014, Cytec's purchases represented approximately [0-5]% of the overall PES volumes traded globally during that year.
- (148) Moreover, prepreg applications do not constitute an important use for PES. According to the Notifying Party's best estimates, the total annual volume of PES that is supplied to prepreg customers is approximately [...] kT, which represents [0-5]% of the total supplies of PES. The most important applications for PES are membranes, automotive applications and food service applications. The market is characterised by a number of large membrane customers such as Nipro and Gambro, whose demand exceeds [...] kT per year, approximately [40-50]% of the globally traded volumes.
- (149) It follows that despite the fact that Cytec's current market share in some segment of the prepregs market exceed the [30-40]% threshold, the merged entity will not have the ability to foreclose access to customers in the hypothetical downstream affected markets for prepregs.

- (150) Based on the above, the Commission considers that the Transaction does not raise serious doubts as to its compatibility with the internal market regarding this vertical relationship.

III.2.1.2.c. PAI/Aerospace film and paste adhesives

- (151) The Transaction creates a vertical link between Solvay's upstream supply of PAI (with its Torlon PAI resin) and Cytec's downstream usage for aerospace film and paste adhesives.

The Parties' market position

- (152) In the category of PAI where the vertical link with Cytec appears, Solvay's share does not exceed [10-20]%, both in the EEA and worldwide. There are several other companies having a larger market share than Solvay, namely SKC Kolon, FujiFilm, Ube and Altana.
- (153) Cytec has a market share of [50-60]% in the market for aerospace film and [30-40]% in the market for paste adhesives in the EEA. In a worldwide market for aerospace film adhesives the market position of Cytec remains the same, whereas its share amounts to [10-20]% in the market for aerospace paste adhesives.
- (154) Cytec uses Torlon PAI as a toughener for the production of certain aerospace film and paste adhesives. However Cytec does not appear to be a very important customer. Cytec's purchases in 2014 amounted to [5-10]% of Solvay's total sales of Torlon PAI which are used in coatings, additives and adhesives in the aircraft industry.
- (155) Cytec uses this product for a very specific niche application in the aircraft industry where extremely high temperature performance is required. This concerns mainly engines manufacturing. Cytec submits that new applications for which PAI may be used are moving to other materials such as ceramic matrix composites.

Input foreclosure

- (156) Solvay has no ability or incentive to foreclose access to Torlon PAI to Cytec's competitors. Regarding ability, customers will have enough alternative suppliers of PI and PAI post-Transaction and Solvay, taking into account its modest market share, will not have the ability to engage in foreclosure strategy, regardless of the exact product market definition (i.e. whether the market is considered comprising PI and PAI, only PAI, or PAI for coatings, additives and adhesives). Regarding incentives, Torlon PAI used in the aircraft coating and adhesive market represents less than [5-10]% of the volumes manufactured by Solvay. PI and PAI are used in large number of other applications, and it is unlikely that Solvay would find profitable to forgo the vast majority of its sales to favour its downstream aircraft and coating and adhesive activities.

Customer foreclosure

- (157) As mentioned above, Torlon PAI is used in a number of industries where Cytec is not active. Given the relatively small sales to Cytec (EUR [...]) and the large volume sold to other customers (around EUR [...] million), it is very unlikely that the removal of Cytec as a customer of PAI would harm competing suppliers of Solvay.

- (158) Based on the above, it follows that the Transaction does not raise serious doubts as to its compatibility with the internal market regarding the market for PAI and the aerospace film and paste adhesives.

III.2.1.2.d. PEEK/Aerospace thermoplastic PEEK prepregs

- (159) Cytec buys PEEK on the market used for the production of prepregs for certain industrial applications (mainly oil and gas and to a small extent for other industrial markets such as defence), giving rise to a vertical relationships with Solvay's PEEK, even though Cytec does currently not buy PEEK from Solvay.

The Parties' market position

- (160) In the upstream market for the production and supply of PEEK, Solvay had a market share of [10-20]% at worldwide level and [10-20]% at EEA level in 2014.
- (161) In the downstream market for aerospace thermoplastic PEEK prepregs Cytec has a market share of [50-60]% at worldwide level and [70-80]% at EEA level in 2014. The other supplier in the market is Toho with [30-40]% at worldwide level and [20-30]% at the EEA level in 2014.
- (162) In 2014, Cytec purchased approximately [...] kT of PEEK on the merchant market, from another major supplier ([...]) for use in the production of (industrial) prepregs.

Input foreclosure

- (163) Post-transaction, in view of Solvay's limited market share on the upstream market, well below 30%, the merged entity will not have the ability to engage in input foreclosure strategies regarding PEEK.

Customer foreclosure

- (164) Cytec's purchase volume represents less than [0-5]% of the total PEEK market in 2014, globally and in the EEA. Given these small purchases, the Transaction is highly unlikely to enable the merged entity to engage in customer foreclosure from the perspective of competing PEEK suppliers.
- (165) Based on the above, the Transaction does not raise serious doubts as to its compatibility with the internal market regarding this vertical relationship.

III.2.2. Horizontally affected market

- (166) In the area of composite materials, the possible market for PEKK and PEEK films and sheets for the aircraft industry is the only horizontally affected market.

III.2.2.1. Market definition

III.2.2.1.a. Product market

- (167) PEKK and PEEK are high performance resins. In addition to Torlon PAI resin discussed above, PEEK and PEKK are sold in film and sheet format.
- (168) The Notifying Party submits that in relation to films and sheets, PEEK films and sheets are higher value-added products made from PEEK and may therefore

represent a separate and distinct market relative to PEEK. PEEK films and sheets are manufactured using additional steps and specialized equipment that are not required in the production of PEEK. This includes extruder, die, thickness measurement and control instruments, roll stacks and winding equipment which transform the PEEK into films or sheets. For certain applications either PEEK films/sheets or PEKK films/sheets can be used, as well as films and sheets made from a number of other high performance polymers. Both PEKK and PEEK could be used to make films and sheets for the aircraft industry (e.g. for aircraft window shades), whereby different preferences may exist as a function of the actual end use.

- (169) The Notifying Party contends that for the aerospace industry applications a hypothetical product market comprising both PEEK and PEKK films and sheets may exist. On this basis a horizontal overlap between the Parties occurs in this area.
- (170) There is no Commission precedent in relation to PEKK and PEEK films and sheets.
- (171) For the purpose of this case, it can be left open whether such a product market exists or whether it is wider or narrower, since the Transaction does not raise serious doubts as to its compatibility with the internal market under any plausible product market definition.

III.2.2.1.b. Geographic market

- (172) The Notifying Party submits that the markets for PEEK/PEKK high performance aircraft films and sheets are worldwide given that pricing is similar for the products between different regions of the world and the products can be easily transported, with transport costs representing only a fraction of the product price. On average, transport costs for both PEEK/PEKK and films/sheets amount to [0-5]% of the product price.
- (173) Moreover, the global supplies of PEEK/PEKK high performance aircraft films and sheets is made from a limited number of production facilities around the world, namely India, the UK and China.
- (174) For the purpose of this case the exact scope of the relevant geographic market can be left open, since the Proposed Transaction does not raise serious doubts as to its compatibility with the internal market under any plausible product market definition.

III.2.2.2. Competitive assessment

- (175) Solvay and Cytec's combined market share exceeds the 20% threshold only on the possible worldwide market for the supply of PEEK/PEKK films and sheets for the aircraft industry, with a combined market share of approximately [30-40]% in 2014.⁶³ On this possible market, Solvay supplies PEEK films and sheets, while Cytec supplies PEKK films and sheets.

⁶³ At the EEA level, the combined market share of the Parties was [0-5]% in 2014.

- (176) The increment of market share brought by Solvay on this possible market is limited, [0-5]% in 2014, and strong competitors are present, such as Victrex ([40-50]%) which is the market leader. Other suppliers include MPI (PEKK), Shin-Etsu (PEKK), Lahmart (PEEK and PEKK), Amcor (PEKK), Evonik (PEKK) and others.
- (177) In view of the limited combined market share of the Parties, the small increment resulting from the Transaction and the existence of other strong competitors, the Transaction does not raise serious concerns as to its compatibility with the internal market in relation to PEKK and PEEK films and sheets for the aircraft industry.

IV. COMMITMENTS

IV.1. FRAMEWORK FOR THE ASSESSMENT OF THE COMMITMENTS

- (178) Where a concentration raises serious doubts as regards its compatibility with the internal market, the Parties may undertake to modify the concentration so as to remove the grounds for the serious doubts identified by the Commission.
- (179) As set out in the Commission's Remedies Notice,⁶⁴ the commitments have to eliminate the competition concerns entirely, and have to be comprehensive and effective from all points of view.
- (180) In assessing whether commitments will maintain effective competition, the Commission considers all relevant factors, including the type, scale and scope of the proposed commitments, with reference to the structure and particular characteristics of the market in which the Transaction is likely to significantly impede effective competition, including the position of the Parties and other participants on the market.⁶⁵

IV.2. COMMITMENTS SUBMITTED BY THE NOTIFYING PARTY

- (181) In order to render the concentration compatible with the internal market, the Notifying Party submitted a set of commitments under Article 6(2) of the Merger Regulation on 11 November 2015 ("Initial Commitments").
- (182) The Commission market tested the Initial Commitments in order to assess whether they are sufficient and suitable to remedy serious doubts identified in the market for phosphor-based solvent extractants for cobalt/nickel.
- (183) Following the feedback received during the market test, the Initial Commitments were refined and improved, and amended commitments were submitted on 25 November 2015 ("Final Commitments"). The Final Commitments are annexed to this decision and form an integral part thereof.

IV.2.1. Initial Commitments

- (184) The Initial Commitments consisted of the divestiture of Solvay's Ionquest 290 business under two possible options: a technology transfer associated with a

⁶⁴ Commission Notice on remedies acceptable under Council Regulation (EC) No 139/2004 and under Commission Regulation (EC) No 802/2004 (OJ C 267, 22.10.2008, p. 1-27).

⁶⁵ Remedies Notice, paragraph 12.

temporary toll manufacturing agreement (Option 1) or a carve out of Solvay's manufacturing unit (the Semi Works Unit), where Ionquest 290 is currently manufactured with other products in Solvay's plant (Option 2).

- (185) In terms of Purchaser requirements for both options, besides the standard requirements, the Initial Commitments provided that the Purchaser shall:
- a. have the proven ability and incentive to establish a manufacturing line for Ionquest 290 (or integrate into an existing production line) in a timely and economical way;
 - b. have proven capacity and incentive to sell Ionquest 290 directly (via an efficient integrated sales network) or indirectly (through distributors);
 - c. not be an existing supplier of solvent extractants for cobalt/nickel based on Bis (2, 4, 4-trimethylpentyl) phosphonic acid.

Option 1

- (186) Option 1 consisted of:
- a. the entirety of Solvay's Ionquest 290 business, including:
 - b. all know-how and technical documentation and assistance required for the production of Ionquest 290;
 - c. all IP rights, including Solvay's patent (US 7,049,463) regarding the process for the preparation of highly purified dialkyl phosphonic acid;
 - d. the Ionquest trademark;
 - e. the entirety of Solvay's Ionquest 290 customer portfolio, all current customers orders and records, as well as historic customer orders and records relating to Ionquest 290 dating back to 2006;
 - f. a short-term toll-manufacturing arrangement on the basis of which Solvay will produce, based on a temporary licence granted by the Purchaser, Ionquest 290 on Solvay's manufacturing unit for supply on a cost basis to the Purchaser in sufficient volumes allowing the Purchaser at the very least to maintain Solvay's existing market position in Ionquest 290 until it has established an alternative production capability.
- (187) Option 1 also foresaw that, at the request of the Purchaser:
- a. Solvay will provide, at its expense, process engineering and operational/production support and training to the Purchaser, in order to ensure the effective transfer of the Ionquest 290 Business within a short time frame; and
 - b. Solvay will use its best endeavours, including appropriate incentive schemes, to transfer appropriate technical/operational and/or commercial personnel to the Purchaser.

Option 2

- (188) Option 2 consisted of:
- a. the entirety of Solvay's Ionquest 290 business as described in Option 1;
 - b. Solvay's Semi-Works Unit at its Oldbury site in the United Kingdom; and
 - c. the five employees currently dedicated to the production of Ionquest 290 at the Semi-Works Unit.
- (189) Option 2 also foresaw, at the option of the Purchaser:
- a. the conclusion of a shared services agreement essentially for utilities, IT and logistic;
 - b. a supply agreement for the supply of raw materials used for the manufacture of Ionquest 290.
- (190) As to the other products manufactured in Solvay's manufacturing unit, namely [...], Option 2 provides short-term transitional toll manufacturing agreements, allowing Solvay to transfer the production of these products to an alternative location.

IV.2.2. *Results of the market test and assessment of the Initial Commitments*

- (191) On the basis of the results of the market test, the Commission considers that, while Option 1 can be viable subject to some improvements, Option 2 would not be able to create an effective and independent competitor to the Notifying Party for phosphor-based cobalt/nickel solvent extractants.
- (192) In this regard, market participants indicated that Option 2, pursuant to which the Purchaser will operate a manufacturing line within Solvay's plant, would create complexity and dependency of the Purchaser vis-à-vis Solvay.⁶⁶ This Option would thus not be viable in the long run. For instance, one participant indicated that "*the operation of a single line in a 3rd party (competitor) plant [is] not viable*" and creates "*extremely high dependency*".⁶⁷ Another stressed that "*owning the asset in the Solvay plant increases complexity and dependency*"⁶⁸, while other insisted on the implementation risks and the lack of viability of such option in the long run.⁶⁹ Participants also strongly doubted on the feasibility to dismantle the manufacturing line to integrate it in the Purchaser's own plant.⁷⁰
- (193) As to Option 1, market participants generally consider that it could be a viable option to create an effective competitor to the Notifying Party by replicating

⁶⁶ See elements provided in non-confidential version of the responses to questions 5.1, 6.1, 9.1, 39.1 and 33 of the RFI Q3-Competitors.

⁶⁷ Non-confidential replies to questions 6.1 and 9.1 of RFI-Q3-Competitors. See also its reply to question 33.

⁶⁸ Non-confidential reply of to question 6.1 of RFI Q3-Competitors.

⁶⁹ Non-confidential replies to questions 38 and 39.1 of RFI Q3-Competitors.

⁷⁰ Non-confidential replies to question 8 of RFI Q9-Competitors.

Solvay's current position in phosphor-based solvent extractants for cobalt/nickel, subject to some improvements.

- (194) First, market participants indicated that Option 1 needs to provide for the possibility for the Purchaser to produce other products than Ionquest 290 to ensure the viability of the investment in a new production line or an adjustment of it.⁷¹
- (195) Indeed, competitors almost unanimously considered that the investments cannot be recovered by Ionquest 290 alone, because of the small size of the market.⁷² By way of examples, one respondent indicated that: "*as such, we estimate that the volume is too small to recover the proposed investments. Likely, additional similar products (as proposed [...], [...],...) need to be transferred to achieve an acceptable capacity utilization*"⁷³, while another stressed that Option 1 would be viable only "*if other products are included and can be manufactured in the same equipment.*"⁷⁴.
- (196) Second, market participants provided several comments to improve the terms of the transitional toll manufacturing agreement.
- a. Many respondents stressed the importance of clarifying the costs that will be borne by the Purchaser during the transitional toll manufacturing agreement so as to avoid in particular any increase in fixed costs.⁷⁵
 - b. Market participants also stressed the need of having some flexibility on top of the minimum purchase requirement, generally + 50%, in the volume purchased from Solvay during the toll manufacturing agreement to address a possible growth of the business.⁷⁶
 - c. As to the duration of the toll manufacturing agreement, on average, respondents indicated that duration of three years should in principle be sufficient for the Purchaser to build its own manufacturing line or adjust an existing one.⁷⁷
- (197) Third, almost all competitors indicated that Option 1 should include key personnel, being in particular experts or technicians in mining extraction and commercial leadership personnel.⁷⁸

⁷¹ See elements provided in non-confidential version of the responses to questions 3, 3.1, 4.1, 32.1 and 36 to RFI Q3-Competitors.

⁷² Non-confidential replies to question 3 of RFI Q3-Competitors.

⁷³ Non-confidential reply to question 3.1 of RFI Q3-Competitors. See also reply to question 31.

⁷⁴ Non-confidential reply to question 3.1 of RFI Q3-Competitors.

⁷⁵ Non-confidential replies to questions 22 and 36 of RFI Q3-Competitors and question 1 to RFI Q4-Customers.

⁷⁶ Non-confidential replies to questions 23 of RFI Q3-Competitors.

⁷⁷ Non-confidential reply to question 20 of the RFI Q3-Competitors.

⁷⁸ Non-confidential replies to questions 1.1, 10.1 and 12 of RFI Q3-Competitors.

- (198) Fourth, respondents stressed the importance of getting the support of Solvay at the time when the Purchaser will need to prove the equivalence of its product to Solvay's Ionquest 290 once it will operate its own manufacturing line.⁷⁹
- (199) Fifth, market participants stressed the need for the Purchaser to have access to the raw materials for the production of Ionquest 290, and in particular hypophosphorus acid,⁸⁰ from Solvay at a competitive price for a transitional period after the end of the toll manufacturing agreement.⁸¹
- (200) Finally, as to the purchaser criteria, the vast majority of respondents considered that the Purchaser would need to demonstrate knowledge in the phosphor-based chemistry.⁸² Customers also insisted on the importance of having a Purchaser with a long term view to run the Ionquest 290 business.⁸³

IV.2.3. *Final Commitments*

- (201) On 25 November 2015, the Notifying Party submitted the Final Commitments, in order to address the concerns raised on the basis of the market test.
- (202) The Final Commitments correspond to an improved version of Option 1, Option 2 not being offered by the Notifying Party any longer.
- (203) Specifically, the Final Commitments contain the following main additional improvements compared to Option 1 of the Initial Commitments:
- a. the Purchaser will have the possibility to acquire a portfolio of other products which are manufactured today in the same manufacturing unit as Ionquest 290 so that the latter could be produced in an economical way; this consists in the option to get a transfer of perpetual, royalty-free licence for all IP rights regarding the composition of and manufacturing process of [...] and [...]; the transfer also includes customer's portfolio, contracts and records;
 - b. Solvay will make its best efforts to transfer key personnel in relation to the operation/manufacturing and marketing of Ionquest 290; a list of key personnel being identified in an annex to the Final Commitments;
 - c. under the toll manufacturing agreement, Ionquest 290 will be manufactured at the Semi-Works Unit in the Oldbury site (United Kingdom) under the same costs structure as it is currently produced; with fixed costs being determined in advance per tonne and only subject to indexation on inflation; its duration will be 3 years, subject to prolongation of 1 year;

⁷⁹ Non confidential replies to question 12 of RFI Q3-Competitors. On the need for customers to perform new testing, see replies to question 7.1 of RFI Q4-Customers.

⁸⁰ Non-confidential reply to question 15.1 of RFI Q3-Competitors.

⁸¹ Non confidential replies to question 15.1 of RFI Q3-Competitors.

⁸² Non confidential replies to questions 27 and 28.1 of RFI Q3-Competitors and replies to questions 16, 17 and 18 of RFI Q4-Customers.

⁸³ Non confidential replies to questions 2.1, 4.1, 20 and 23 of RFI Q4-Customers.

- d. Solvay will make available a "reserved capacity" of an additional [...] % of volume of Ionquest 290 (up to a total of [...] tons per year), allowing for sufficient growth potential;
- e. Solvay will provide the Purchaser at no cost support in the context of customer qualification proceedings for a duration of 24 months following the end of the toll manufacturing agreement;
- f. at the option of the purchaser, Solvay will supply the raw materials required for the production of Ionquest 290 from or via Solvay at cost for a transitional period of at least 3 years when the Purchaser will have its own production line; and
- g. to be suitable, the Purchaser will have to demonstrate, on top of the criteria in the Initial Commitments, proven knowledge regarding phosphor-based chemistry and demonstrate on the basis of a technical and business plan its ability and incentive to establish a manufacturing line for the production of Ionquest 290 for the long run.

IV.2.4. *Assessment of the Final Commitments*

- (204) The Commission analysed the suitability of the Final Commitments to remedy the serious doubts identified in relation the cobalt/nickel phosphor-based solvent extractants sold worldwide.
- (205) To this end, the Commission assessed whether the scope of the Final Commitments are sufficient and suitable to address the competition concerns identified given the nature of the industry, whether they are viable and likely to be effective in practice and whether they can be easily implemented and, finally, are attractive for purchasers.

IV.2.4.1. Scope of the Final Commitments and their suitability to remove the identified competitive concerns

- (206) The Commission identified serious doubts as to the compatibility of the Transaction with the internal market because of the combination of the two main global suppliers of phosphor-based solvent extractants for cobalt and nickel separation. The overlap results from the sale of Cytec's Cyanex 272 and Solvay's Ionquest 290.
- (207) The divestment of Solvay's Ionquest 290 business will remove the problematic overlap in its entirety and create a new competitor to the Notifying Party with similar strength as Solvay pre-Transaction, subject to the Purchaser being able to effectively take over the production of Ionquest 290 in an economical way in its own production facility.
- (208) The Final Commitments include all the support from Solvay to the Purchaser in building its own manufacturing line or adjust an existing one as well as key personnel to operate and develop the Ionquest 290 business. The transitional toll manufacturing agreement gives the Purchaser the time needed to transfer the business to its facility and ensure continuity of supplies to customers.
- (209) The volume supplied to the Purchaser under the toll manufacturing agreement will be equivalent to Solvay's Ionquest 290 sales in 2014 and close to the average volume sold in the last three years. The [...] % additional volume the Purchaser can

request will further enable the Purchaser to at least maintain and potentially develop the Ionquest 290 business.

- (210) Based on the transferred know-how and IP rights, the Purchaser will be able to produce and supply the same product as Solvay, with the same specifications and quality. The transfer of the Ionquest trademark will further enable the Purchaser to build its market position on customers brand awareness.
- (211) Therefore, the Final Commitments allow replicating Solvay's competitive position in the market for phosphor-based solvent extractants for cobalt/nickel, to competitively constrain the merged entity post-Transaction.
- (212) On this basis the Commission considers that the Final Commitments are sufficient in scope and suitable to remove the competition concerns identified.

IV.2.4.2. Viability and likelihood of effectiveness of the Final Commitments in practice

- (213) Participants in the market test insisted on the small size of the Ionquest 290 business and the need for the Purchaser to produce complementary products to ensure the viability of the business.⁸⁴ Indeed, Solvay's Ionquest 290 business generated sales for EUR [...] million in 2014 (with an EBITA margin of [...]%) and the production of Ionquest 290 represented only [...]% of the output in volume of Solvay's manufacturing unit.
- (214) Given the small size of the Ionquest 290 business and of the overall market for phosphor-based solvent extractants for cobalt/ nickel (EUR [10-15] million in 2014) and the proportion it represents in terms of output of the manufacturing equipment, the Final Commitments include not only the Ionquest 290 business but also, at the request of the Purchaser, the products [...] and [...] that can be manufactured on the same production line.
- (215) This provision ensures that the capital expenditure that will need to be invested in a new manufacturing line or an adjustment of an existing line can be recovered in a timely manner. Indeed, depending on the Purchaser's current manufacturing equipment and portfolio of products, it will have the option of acquiring businesses of the other products manufactured with similar equipment to make the investment for Ionquest 290 profitable. The [...] and [...] businesses include a perpetual, royalty free licence of IP rights and a temporary licence on trademarks, as well as all customers' information. The products concerned, together with Ionquest 290, cover [...]% of the output of Solvay's manufacturing unit.⁸⁵ This enables flexibility depending on the identity of the Purchaser to ensure the viability of the Ionquest 290 business in the long run.
- (216) The Final Commitments also provide that the transfer of key personnel is at the option of the Purchaser. Thus, if the Purchaser already has the required personnel, it will not need to bear unnecessary costs.

⁸⁴ See elements provided in non-confidential version of the responses to questions 3, 3.1, 4.1, 32.1 and 36 to RFI Q3-Competitors.

⁸⁵ The only product that is currently manufactured on the Semi-Works Unit and for which the Purchaser cannot benefit from a licence on the know-how and IP rights is an intermediary product of Solvay, [...], representing only [...] tonnes in 2014.

- (217) Finally, the Final Commitments provide that all customers' information will be transferred to the Purchaser, including customer contracts, orders and records since 2006, the date of launch of Ionquest 290. This information will enable the Purchaser to keep the Ionquest 290 customers base. For the duration of the toll manufacturing agreement, Ionquest 290 will be manufactured following the same specifications and quality in the same production line and plant so that customers would not need to requalify and test the product which could create a risk of losing customers. The Final Commitments also provide for Solvay's support in the testing of the equivalence of the products at the end of the toll manufacturing agreement, so that the Purchaser will be in a position to reassure and keep all its customers.
- (218) On this basis, the Commission considers that the Final Commitments provide for the acquisition of a viable for the Purchaser in the long term. The business should be transferred within [...] months; whereas the Purchaser should be able to establish an operational production line based on the technology transfer within 3 to 4 years.

IV.2.4.3. Ability of the Final Commitments to be implemented in practice

- (219) Three main implementation risks were identified during the investigation: (i) the transitional toll manufacturing agreement should not give Solvay the possibility to render the supply of Ionquest 290 purchased during this period uneconomical; (ii) access to hypophosphorous acid, the key raw material used in the production of Ionquest 290 could prove difficult, (iii) the purchaser may not have the incentives to effectively invest in the construction of a new production line, but rather operating the business only for the duration of the Toll manufacturing agreement.
- (220) Regarding the Toll manufacturing agreement, the Final Commitments provide that Solvay shall manufacture Ionquest 290 under the same costs structure, in the same manufacturing line within the same plant as currently. Fixed costs shall be determined in advance at the date of signing of the sale and purchase agreement, and only operating costs, mainly utilities, will vary.
- (221) The Final Commitments also provide that Solvay will have to supply a product with the same specifications and quality as it does currently. Any volumes of Ionquest 290 which do not meet these product specifications and quality requirements will be retained by Solvay at its own cost for recycling in the production process.
- (222) Regarding the access to hypophosphorous acid, Solvay currently uses a product that it manufactures in China. Solvay as well as a market participant identified several potential suppliers of hypophosphorous acid also located in China. The Final Commitments provide that at the option of the Purchaser, Solvay will supply hypophosphorous acid, for a period of [...] years, with the possibility to be prolonged for [...] more years. This would give sufficient time to the purchaser to qualify an alternative supplier for hypophosphorous acid.
- (223) To address the risk related to the Purchaser's incentives to invest in a technology transfer, the Final Commitments provide for strict purchaser criteria, including the need to present a technical and business plan demonstrating the Purchaser's capacity and incentives to operate the Ionquest 290 business in the long run. The option to acquire the [...] and [...] businesses together with Ionquest also provide further guarantee to enable the Purchaser to operate a profitable business.

- (224) The Final Commitments thus sufficiently and effectively limit the implementation risks in relation to the Toll manufacturing agreement, the access to raw material and incentives of the Purchaser to establish its present on the market on a lasting basis.
- (225) On this basis, the Commission considers that the Final Commitments effectively mitigate the implementation risks.

IV.2.4.4. Attractiveness of the package for Purchasers

- (226) The Commission points out that the Ionquest 290 business is an attractive and profitable with an EBITA margin of [...] % in 2014 which is likely to remain at similar levels in the future.

Table 4 – Turnover and EBITDA for Ionquest 290 Business⁸⁶

	2013 in EUR	2014 in EUR	2015 (forecast) in EUR	2016 (forecast) in EUR
Turnover	[...]	[...]	[...]	[...]
EBITA	[...]	[...]	[...]	[...]
EBITA margin (% of turnover)	[...] %	[...] %	[...] %	[...] %

** EBITDA calculations based on a fixed cost allocation according to the relative amount of operating hours spent for the production of Ionquest 290*

- (227) Documents provided by the Notifying Party demonstrate that the market for solvent extractants used in the cobalt/nickel separation has a growth potential, since the downstream market for refined cobalt has grown from 57 000 tonnes in 2006 to 93 000 tonnes in 2015 and is expected to reach 130 000 tonnes by 2025.⁸⁷ New cobalt producers are expected to add refinery capacity to the market.
- (228) Should [...] and [...] business be included in the portfolio, the global sales amount to EUR [...] in 2014 (EUR [...] for [...] Business and EUR [...] for [...] Business), with an EBITA margin of [...] % for [...] Business and [...] % for [...] Business.
- (229) The attractiveness of the package was evidenced by the number of potentially interested purchasers based on an improved Option 1 which has been reflected in the Final Commitments, including in particular strong chemical companies knowledgeable in the phosphor-based chemistry.
- (230) On this basis, the Commission considers that the Final Commitments are attractive and likely to be acquired by a suitable Purchaser.

IV.2.5. Conclusion on Final Commitments

- (231) For the reasons outlined above, and in view of the results of the market test and the ensuing improvements to the Initials Commitments, the Commission considers the Final Commitments to be sufficient in scope and suitable to eliminate the serious

⁸⁶ Source: Form RM.

⁸⁷ CRU The Independent Authority mining/metals/fertilizers, presentation given on the 20 May 2015, "Cobalt: market balance in 2020s?".

doubts as to the compatibility of the Transaction with the internal market in relation to phosphor-based solvent extractants for cobalt/nickel.

IV.3. CONDITIONS AND OBLIGATIONS

- (232) Under the first sentence of the second subparagraph of Article 6(2) of the Merger Regulation, the Commission may attach to its Decision conditions and obligations intended to ensure that the undertakings concerned comply with the commitments they have entered into vis-à-vis the Commission with a view to rendering a notified concentration compatible with the internal market.
- (233) The achievement of the measure that gives rise to the structural change of the market is a condition, whereas the implementing steps which are necessary to achieve this result are generally obligations on the Notifying Party. Where a condition is not fulfilled, the Commission's decision declaring the concentration compatible with the internal market no longer stands. Where the undertakings concerned commit a breach of an obligation, the Commission may revoke the clearance decision in accordance with Article 8(6)(b) of the Merger Regulation. The undertakings concerned may also be subject to fines and periodic penalty payments under Articles 14(2) and 15(1) of the Merger Regulation.
- (234) In accordance with the distinction described above, the Decision in this case is conditioned on the full compliance with the requirements set out in sections B and C (including the Schedule) of the Final Commitments (conditions), while all other Sections constitute obligations.
- (235) The full text of the Final Commitments is attached as an Annex to this Decision and forms an integral part thereof.

V. CONCLUSION

- (236) For the above reasons, the Commission has decided not to oppose the notified operation as modified by the Final 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 sections B and C of the Final 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 the Merger Regulation and Article 57 of the EEA Agreement.

For the Commission

(signed)
Margrethe VESTAGER
Member of the Commission

Case M.7777 – Solvay/Cytec

COMMITMENTS TO THE EUROPEAN COMMISSION

Pursuant to Article 6(2) of Council Regulation (EC) No 139/2004 (the *Merger Regulation*), Solvay SA (*Solvay* or the *Notifying Party*) hereby enters into the following Commitments (the *Commitments*) vis-à-vis the European Commission (the *Commission*) with a view to rendering the acquisition of sole control of Cytec Industries Inc. (*Cytec*) (the *Concentration*) compatible with the internal market and the functioning of the EEA Agreement.

This text shall be interpreted in light of the Commission's decision pursuant to Article 6(1)(b) of the Merger Regulation to declare the Concentration compatible with the internal market and the functioning of the EEA Agreement (the *Decision*), in the general framework of European Union law, in particular in 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 (the *Remedies Notice*).

The Commitments shall take effect upon the Effective Date, provided that if completion of the Concentration does not subsequently take place for whatever reason and is thereby abandoned, the Notifying Party shall not be bound by these Commitments.

Section A. Definitions

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

Affiliated Undertakings: undertakings controlled by the Notifying Party and/or by the ultimate parents of the Notifying Party, whereby the notion of control shall be interpreted pursuant to Article 3 of the Merger Regulation and in light of the Commission Consolidated Jurisdictional Notice under Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings (the *Consolidated Jurisdictional Notice*).

Assets: the assets that contribute to the current operation or are necessary to ensure the viability and competitiveness of the Divestment Business, as indicated in Section B and described more in detail in the Schedule.

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

Closing Period: the period of [...] from the approval of the Purchaser and the terms of sale by the Commission.

Confidential Information: any business secrets, know-how, commercial information, or any other information of a proprietary nature that is not in the public domain.

Conflict of Interest: any conflict of interest that impairs the Trustee's objectivity and independence in discharging its duties under the Commitments.

Divestiture Trustee: one or more natural or legal person(s) who is/are approved by the Commission and appointed by the Notifying Party and who has received from the Notifying Party the exclusive Trustee Mandate to sell the Divestment Business to a Purchaser at no minimum price.

Divestment Business: the Ionquest 290 Business and the [...] Business as defined in Section B and in the Schedule which the Notifying Party commits to divest, it being understood that the [...]Business will only be divested at the option of the Purchaser to be exercised at the time of the conclusion of the sale and purchase agreement for the sale of the Divestment Business.

Effective Date: the date of adoption of the Decision.

Fast-Track Dispute Resolution Procedure: this term shall have the meaning given in Section G.

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

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

Ionquest 290 Business: the business as defined in paragraph 7(a) of Section B and in the Schedule and which the Notifying Party commits to divest.

Key Personnel: all personnel listed in the Annex.

Monitoring Trustee: one or more natural or legal person(s) who is/are approved by the Commission and appointed by the Notifying Party, and who has/have the duty to monitor the Notifying Party's compliance with the conditions and obligations attached to the Decision.

[...] Business: the business as defined in paragraph 7(b) of Section B and in the Schedule and which the Notifying Party commits to divest at the option of the Purchaser.

Parties: the Notifying Party and the Purchaser in the context of the Fast-Track Dispute Resolution Procedure.

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

Purchaser Criteria: the criteria laid down in paragraph 24 of these Commitments that the Purchaser must fulfil in order to be approved by the Commission.

Schedule: the schedule to these Commitments describing in more detail the Divestment Business.

Solvay SA: A company incorporated under the laws of Belgium, with its registered office at Rue de Ransbeek, 310, B-1120, Brussels, Belgium and registered under number 403.091.220 with the Belgian Crossroad for Undertakings.

Transfer Support Commitment: the Notifying Party's commitment to support the transfer of the Divestment Business in accordance with Section C.

Transitional Toll Manufacturing Agreement: the Notifying Party's commitment to supply on a temporary basis Ionquest 290 to the Purchaser as defined in paragraphs 7(c) and 8 and in the Schedule.

Trustee(s): the Monitoring Trustee and/or the Divestiture Trustee as the case may be.

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

Section B. The commitment to divest and the Divestment Business

Commitment to divest

2. In order to maintain effective competition, the Notifying Party commits to divest, or procure the divestiture of the entirety of Solvay's phosphorous-based solvent extractants business for the extraction of cobalt from nickel in the form of Solvay's Ionquest 290 business (the ***Ionquest 290 Business***).
3. In order to ensure the economic viability of the Ionquest 290 Business in the hands of the Purchaser, the Notifying Party also commits to divest, at the option of the Purchaser of the Ionquest 290 Business, the entirety of Solvay's business for the supply of [...]. This commitment will only apply if the Purchaser requires [...] Business to ensure the viability of the Ionquest 290 Business, e.g. if they are needed to operate economically the Purchaser's production line used for the production of Ionquest 290.
4. The Notifying Party 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 25 of these Commitments. To carry out the divestitures, the Notifying Party 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 the Notifying Party has not entered into such an agreement at the end of the First Divestiture Period, the Notifying Party shall grant the Divestiture Trustee an exclusive mandate to sell the Divestment Business in accordance with the procedure described in paragraph 37 in the Trustee Divestiture Period.
5. The Notifying Party shall be deemed to have complied with this commitment if:
 - (a) by the end of the Trustee Divestiture Period, the Notifying Party or the Divestiture Trustee has entered into a final binding sale and purchase agreement for the divestment of the Divestment Business and the Commission approves the proposed purchaser and the terms of sale as being

consistent with the Commitments in accordance with the procedure described in paragraph 25; and

- (b) the Closing of the sale of the Ionquest 290 Business to the Purchaser takes place within the Closing Period and the Ionquest 290 Business has effectively been transferred and all related agreements have been concluded; and
 - (c) the Closing of the sale of [...] Business to the Purchaser of the Ionquest 290 Business takes place by the end of the Transitional Toll Manufacturing Agreement and [...] Business has effectively been transferred by then.
6. In order to maintain the structural effect of the Commitments, the Notifying Party shall, for a period of 10 years after Closing, not acquire, whether directly or indirectly, the possibility of exercising influence (as defined in paragraph 43 of the Remedies Notice, footnote 3) over the Ionquest 290 Business, unless, following the submission of a reasoned request from the Notifying Party showing good cause and accompanied by a report from the Monitoring Trustee (as provided in paragraph 63 of these Commitments), the Commission finds that the structure of the market has changed to such an extent that the absence of influence over the Ionquest 290 Business is no longer necessary to render the proposed concentration compatible with the internal market.

Structure and definition of the Divestment Business

7. The Divestment Business consists of:

- (a) the entirety of Solvay's Ionquest 290 Business, including:
 - (i) all know-how and technical documentation and assistance required for the production of Ionquest 290;
 - (ii) all IP rights, including Solvay's patent (US 7,049,463) regarding the process for the preparation of highly purified dialkyl phosphinic acid (a method for the removal of impurities by washing in the production of Ionquest 290);
 - (iii) the Ionquest trademark;
 - (iv) any other tangible or intangible assets, with the exception of any physical production assets, which the Purchaser may reasonably require to successfully complete the transfer of the Ionquest 290 Business to an alternative production location; and
 - (v) the entirety of Solvay's Ionquest 290 customer portfolio, all current customer contracts, orders and records, as well as historic customer orders and records relating to Ionquest 290 dating back to 2006;

- (b) at the option of the Purchaser, the entirety of Solvay's [...] Business, including:
 - (i) a perpetual, royalty-free licence for all know-how and technical documentation and assistance required for the production of [...];
 - (ii) a perpetual, royalty-free licence for all IP rights regarding the composition of and manufacturing process [...];
 - (iii) for a reasonably sufficient period of at least two years, a non-transferrable royalty-free licence for the use of [...] trademarks, it being understood that the Purchaser will have the perpetual right (at no cost) to use the relevant code numbers [...];
 - (iv) any other tangible or intangible assets, with the exception of any physical production assets, which the Purchaser may reasonably require to successfully complete the transfer of the [...] Business to an alternative production location; and
 - (v) the entirety of Solvay's customer portfolio, all current customer contracts, orders and records, as well as historic customer orders and records relating to [...];
 - (c) a short-term toll-manufacturing arrangement (the ***Transitional Toll Manufacturing Agreement***) on the basis of which Solvay will produce, based on a temporary licence granted by the Purchaser for the use of the relevant intellectual property, know-how and technical documentation, Ionquest 290 on the Semi-Works Unit located at the Oldbury site in the UK (the ***Semi-Works Unit***) for supply to the Purchaser in sufficient volumes allowing the Purchaser to maintain and expand Solvay's existing market position in Ionquest 290 until it has established an alternative production capability; the Transitional Toll Manufacturing Agreement will comply with the principles set out in paragraph 4 of the Schedule.
8. The Notifying Party commits that it will continue to operate the Semi-Works Unit in the way in which it is operated at the date of these Commitments and in the same location for the duration of the Transitional Toll Manufacturing Agreement, to ensure the continued supply of Ionquest 290 to the Purchaser under the same costs structure and of the same quality and consistency during that period (it being understood that the production volumes of the relevant products produced on the Semi-Works Unit may fluctuate as long as it does not affect Ionquest 290's costs structure as agreed with the Purchaser).
9. At the request of the Purchaser, Solvay will use its best efforts, including appropriate incentive schemes, to transfer any of the operational/production, industrial/technical and/or commercial and marketing personnel listed in the Annex to these Commitments (***Key Personnel***) to the Purchaser.
10. For the sake of clarity, the Divestment Business shall not include any physical production assets or manufacturing units owned or operated by Solvay.

11. Strict firewall procedures will be adopted so as to ensure that any competitively sensitive information relating to the Divestment Business and arising from the operation of the Transitional Toll Manufacturing Agreement will not be disclosed (whether within or outside the Notifying Party's operations) beyond what is reasonably required for the compliance with the obligations arising from this Transitional Toll Manufacturing Agreement.
12. The Divestment Business is further described in the Schedule, which forms an integral part of the Commitments.

Section C. Commitment to support the transfer of the Divestment Business

13. The Notifying Party commits to provide, at no cost and until 6 months after the Purchaser has produced the first batch of the relevant product on its production unit, any support which the Purchaser may reasonably request to ensure an effective transfer of the Divestment Business to its own production location by the end of the Transitional Toll Manufacturing Agreement. More specifically, Solvay commits to provide the Purchaser at its request with the following support and/or training, including by means of a temporary secondment of relevant Solvay's personnel:
 - (a) support for the design and the commissioning of a new production facility for the production of Ionquest 290 and any other relevant product [...] or the adjustment of an existing production facility at the Purchaser's premises, on the basis of the know-how and technical documentation included in the Divestment Business;
 - (b) technical training to the Purchaser's personnel in relation to the production of Ionquest 290 and, to the extent the Purchaser opts to acquire [...], and any other aspects regarding the operation and maintenance of the relevant production assets; and
 - (c) training with respect to the marketing/commercialisation of Ionquest 290 and, to the extent the Purchaser opts to acquire the [...].
14. In addition, the Notifying Party commits to provide during a period of 24 months following the end of the Transitional Toll Manufacturing Agreement, at no cost, support in the context of customer qualification proceedings for Ionquest 290 which the Purchaser may need to undergo following the transfer of the Ionquest 290 Business. In particular, this support shall consist of the provision by Solvay of any data or information which a customer may require to compare the chemical equivalence (i.e. the chemical purity and other physical specifications) of the Purchaser's Ionquest 290 product offering with Solvay's historic offering and will be limited to Solvay's historic or existing customers, i.e. those customers for which a contract, order or record has been transferred to the Purchaser as part of the Ionquest 290 Business, as well as all the Purchaser's customers at the date of the end of the Transitional Toll Manufacturing Agreement.

Section D. Related commitments

Preservation of viability, marketability and competitiveness

15. From the Effective Date until Closing, the Notifying Party shall preserve or procure the preservation of 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 the Notifying Party undertakes:
- (a) not to carry out any action that might have a significant adverse impact on the value, management or competitiveness of the Divestment Business and 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, or procure to make available, sufficient resources for the development of the Divestment Business, on the basis and continuation of the existing business plans; and
 - (c) if applicable, to take all reasonable steps, or procure that all reasonable steps are being taken, including appropriate incentive schemes (based on industry practice), to encourage all Key Personnel to remain in their current position. Where, nevertheless, individual members of the Key Personnel exceptionally leave their current position, the Notifying Party shall provide a reasoned proposal to replace the person or persons concerned to the Commission and the Monitoring Trustee. The Notifying Party must be able to demonstrate to the Commission that the replacement is well suited to carry out the functions exercised by those individual members of the Key Personnel. The replacement shall take place under the supervision of the Monitoring Trustee, who shall report to the Commission.

Hold-separate obligations

16. The Notifying Party commits, from the Effective Date until Closing, to keep the Ionquest 290 Business separate from the businesses it is retaining and to ensure that unless explicitly permitted under these Commitments: (i) management and staff of the businesses retained by the Notifying Party have no involvement in the Ionquest 290 Business; and to the extent relevant (ii) the Key Personnel has no involvement in any competing business retained by the Notifying Party and do not report to any individual outside Key Personnel for any matters related to Ionquest 290 Business.
17. Until Closing, the Notifying Party shall assist the Monitoring Trustee in ensuring that the Ionquest 290 Business is managed as a distinct and saleable business with a view to ensuring its continued economic viability, marketability and competitiveness. Immediately after the adoption of the Decision, the Notifying Party shall appoint a Hold Separate Manager. 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 commercial independence from the businesses retained by the Notifying Party. In particular, from the Effective Date until Closing, the Hold Separate Manager shall assume all commercial responsibilities for the Ionquest 290 Business.

The Hold Separate Manager shall be entitled to request from Solvay all the operational support, also in terms of involvement of Key Personnel that he deems necessary for the preservation of the viability of the Ionquest 290 Business. Key Personnel shall prioritise the Ionquest 290 Business over the retained businesses and Solvay shall not refuse any request from the Hold Separate Manager, unless it is considered unreasonable under the supervision of the Monitoring Trustee and the Commission. During this period, the Hold Separate Manager will not have any responsibilities with respect to any businesses acquired from Cytec and will be bound by appropriate non-disclosure obligations to prevent the flow of commercially sensitive information with respect to the Ionquest 290 Business.

18. The Hold Separate Manager shall closely cooperate with and report to the Monitoring Trustee and, if applicable, the Divestiture Trustee. Any replacement of the Hold Separate Manager shall be subject to the procedure laid down in paragraph 15(c) of these Commitments. The Commission may, after having heard the Notifying Party, require the Notifying Party to replace the Hold Separate Manager.

Ring-fencing

19. The Notifying Party shall implement, or procure to implement, all necessary measures to ensure that it does not, after the Effective Date, obtain any Confidential Information relating to the Ionquest 290 Business and that any such Confidential Information obtained by the Notifying Party before the Effective Date will be eliminated and not be used by the Notifying Party. In particular, the participation of the Ionquest 290 Business in any central information technology network shall be severed to the extent possible, without compromising the viability of the Ionquest 290 Business. The Notifying Party may obtain or keep information relating to the Ionquest 290 Business which is reasonably necessary for the divestiture of the Ionquest 290 Business or the disclosure of which to the Notifying Party is required by law.

Non-solicitation clause

20. To the extent applicable, the Notifying Party undertakes, subject to customary limitations, not to solicit, and to procure that Affiliated Undertakings do not solicit, the Key Personnel that may be transferred with the Divestment Business for a period of 2 years after Closing.

Due diligence

21. In order to enable potential purchasers to carry out a reasonable due diligence of the Divestment Business, the Notifying Party 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; and
 - (b) provide to potential purchasers sufficient information relating to the Key Personnel and allow them reasonable access to the Key Personnel.

Reporting

22. The Notifying Party 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). The Notifying Party shall submit a list of all potential purchasers having expressed interest in acquiring the Divestment Business, as the case may be, to the Commission at each and every stage of the divestiture process, as well as a copy of all the offers made by potential purchasers within five days of their receipt.
23. The Notifying Party shall inform the Commission and the Monitoring Trustee on the preparation of the data room documentation and the due diligence procedure and shall submit a copy of any information memorandum to the Commission and the Monitoring Trustee before sending the memorandum out to potential purchasers.

Section E. The Purchaser

24. In order to be approved by the Commission, the Purchaser of the Divestment Business must fulfil the following criteria:
 - (a) the Purchaser shall be independent of and unconnected to the Notifying Party and its Affiliated Undertakings (this being assessed having regard to the situation following the divestiture);
 - (b) the Purchaser shall have the financial resources, proven expertise and incentive to maintain and develop the Ionquest 290 Business, as a viable and active competitive force in competition with the Notifying Party and other competitors; in particular, the Purchaser shall have the proven knowledge regarding the relevant chemistry (either based on pre-existing production activities or otherwise);
 - (c) the Purchaser shall demonstrate on the basis of its technical and business plan its ability and incentive to establish a manufacturing line for Ionquest 290 (or integrate into an existing production line) in a timely and economical way and to continue the production of Ionquest 290 in the long run;
 - (d) the Purchaser shall have the proven capacity and incentive to sell Ionquest 290 directly (via an efficient integrated sales network) or indirectly (through distributors);
 - (e) the Purchaser shall not be an existing producer of solvent extractants for cobalt/nickel based on Bis (2, 4, 4-trimethylpentyl) phosphinic acid; and
 - (f) the acquisition of the Divestment Business by the Purchaser must neither be likely to create, in 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. In particular, the Purchaser must reasonably be expected to obtain all necessary approvals from the relevant regulatory authorities for the acquisition of the Divestment Business.

25. The final binding sale and purchase agreement (as well as ancillary agreements) relating to the divestment of the Divestment Business shall be conditional on the Commission's approval. When the Notifying Party has reached an agreement with a purchaser, it shall submit a fully documented and reasoned proposal, including a copy of the final agreement(s), within one week to the Commission and the Monitoring Trustee. The Notifying Party must be able to demonstrate to the Commission that the purchaser fulfils the Purchaser Criteria and that the Divestment Business is being sold in a manner consistent with the Commission's Decision and the Commitments. For the approval, the Commission shall verify that the purchaser fulfils the Purchaser Criteria and that the Divestment Business is being sold in a manner consistent with the Commitments including their objective to bring about a lasting structural change in the market. The Commission may approve the sale of the Divestment Business without one or more Assets or parts of the Key Personnel, or by substituting one or more Assets or parts of the Key Personnel with one or more different assets or different personnel, if this does not affect the viability and competitiveness of the Divestment Business after the sale, taking account of the proposed purchaser.

Section F. Trustee

I. Appointment procedure

26. The Notifying Party shall appoint a Monitoring Trustee to carry out the functions specified in these Commitments for a Monitoring Trustee. The Notifying Party commits not to close the Concentration before the appointment of a Monitoring Trustee.
27. If the Notifying Party has not entered into a binding sale and purchase agreement regarding the Divestment Business one month before the end of the First Divestiture Period or if the Commission has rejected a purchaser proposed by the Notifying Party at that time or thereafter, the Notifying Party shall appoint a Divestiture Trustee. The appointment of the Divestiture Trustee shall take effect upon the commencement of the Trustee Divestiture Period.
28. The Trustee shall:
- (i) at the time of appointment, be independent of the Notifying Party and its Affiliated Undertakings;
 - (ii) possess the necessary qualifications to carry out its mandate, for example have sufficient relevant experience as an investment banker or consultant or auditor; and
 - (iii) neither have nor become exposed to a Conflict of Interest.
29. The Trustee shall be remunerated by the Notifying Party 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, such success premium may only be earned if the divestiture takes place within the Trustee Divestiture Period.

Proposal by the Notifying Party

30. No later than two weeks after the Effective Date, the Notifying Party shall submit the name or names of one or more natural or legal persons whom the Notifying Party 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 or on request by the Commission, the Notifying Party shall submit a list of one or more persons whom the Notifying Party proposes to appoint as Divestiture Trustee to the Commission for approval. The proposal shall contain sufficient information for the Commission to verify that the person or persons proposed as Trustee fulfil the requirements set out in paragraph 28 and shall include:
- (a) the full terms of the proposed mandate, which shall include all provisions necessary to enable the Trustee to fulfil its duties under these Commitments;
 - (b) the outline of a work plan which describes how the Trustee intends to carry out its assigned tasks; and
 - (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

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

New proposal by the Notifying Party

32. If all the proposed Trustees are rejected, the Notifying Party shall submit the names of at least two more natural or legal persons within one week of being informed of the rejection, in accordance with paragraphs 26 and 31 of these Commitments.

Trustee nominated by the Commission

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

II. Functions of the Trustee

34. The Trustee shall assume its specified duties and obligations in order to ensure compliance with the Commitments. The Commission may, on its own initiative or at the request of the Trustee or the Notifying Party, 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

35. The Monitoring Trustee shall:

- (a) 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.
- (b) oversee, in close co-operation with the Hold Separate Manager, the on-going management of the Divestment Business, with a view to ensuring its continued economic viability, marketability and competitiveness and monitor compliance by the Notifying Party with the conditions and obligations attached to the Decision. To that end the Monitoring Trustee shall:
 - (i) monitor the preservation of the economic viability, marketability and competitiveness of the Divestment Business and the keeping separate of the Ionquest 290 Business from the business retained by the Notifying Party, in accordance with paragraph 15 of these Commitments;
 - (ii) supervise the management of the Ionquest 290 Business as a distinct and saleable business, in accordance with paragraph 16 of these Commitments;
 - (iii) with respect to Confidential Information:
 - determine all necessary measures to ensure that the Notifying Party does not after the Effective Date obtain any Confidential Information relating to the Ionquest 290 Business,
 - in particular strive for the severing of the Ionquest 290 Business' participation in a central information technology network to the extent possible, without compromising the viability of the Ionquest 290 Business,
 - make sure that any Confidential Information relating to the Ionquest 290 Business obtained by the Notifying Party before the Effective Date is eliminated and will not be used by the Notifying Party, and
 - decide whether such information may be disclosed to or kept by the Notifying Party as the disclosure is reasonably necessary to allow the Notifying Party to carry out the divestiture or as the disclosure is required by law;
 - (iv) monitor the splitting of assets and, where applicable, the allocation of personnel between the Ionquest 290 Business and the Notifying Party or Affiliated Undertakings;

- (c) propose to the Notifying Party such measures as the Monitoring Trustee considers necessary to ensure the Notifying Party's compliance with the conditions and obligations attached to the Decision, in particular the maintenance of the full economic viability, marketability or competitiveness of the Divestment Business, the holding separate of the Ionquest 290 Business and the non-disclosure of competitively sensitive information;
- (d) verify that the inclusion, at the Purchaser's request, of the [...] Business in the Divestment Business is required to ensure the viability of the Ionquest 290 Business in accordance with paragraph 3 of the Commitments;
- (e) in the event of a disagreement between the Notifying Party and the Purchaser, assess the reasonableness of any request made by the Purchaser for the inclusion of any tangible or intangible assets in the Divestment Business in accordance with paragraphs 7(a)(iv) and 7(b)(iv) of the Commitments, where necessary consulting with a relevant industry expert in accordance with paragraph 43;
- (f) review and assess potential purchasers as well as the progress of the divestiture process and verify that, dependent on the stage of the divestiture process:
 - (i) potential purchasers receive sufficient and correct information relating to the Divestment Business as applicable and the Key Personnel in particular by reviewing, if available, the data room documentation, the information memorandum and the due diligence process, and
 - (ii) potential purchasers are granted reasonable access to the Key Personnel;
- (g) act as a contact point for any requests by third parties, in particular potential purchasers, in relation to the Commitments;
- (h) provide to the Commission, sending the Notifying Party a non-confidential copy at the same time, a written report within 15 days after the end of every month that shall cover the operation and management of the Ionquest 290 Business as well as the splitting of assets and the allocation of Key Personnel 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;
- (i) promptly report in writing to the Commission, sending the Notifying Party a non-confidential copy at the same time, if it concludes on reasonable grounds that the Notifying Party is failing to comply with these Commitments;
- (j) within one week after receipt of the documented proposal referred to in paragraph 25 of these Commitments, submit to the Commission, sending the Notifying Party a non-confidential copy at the same time, a reasoned opinion as to the suitability and independence of the proposed purchaser and the viability of the Ionquest 290 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 Key

Personnel affects the viability of the Ionquest 290 Business after the sale, taking account of the proposed purchaser; and

- (k) assume the other functions assigned to the Monitoring Trustee under the conditions and obligations attached to the Decision.

36. If the Monitoring and Divestiture Trustee are not the same legal or natural persons, the Monitoring Trustee and the Divestiture Trustee shall cooperate closely with each other during and for the purpose of the preparation of the Trustee Divestiture Period in order to facilitate each other's tasks.

Duties and obligations of the Divestiture Trustee

37. 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 (and ancillary agreements) as in line with the Commission's Decision and the Commitments in accordance with paragraphs 24 and 25 of these Commitments. The Divestiture Trustee shall include in the sale and purchase agreement (as well as in any ancillary agreements) 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 affect the sale. The Divestiture Trustee shall protect the legitimate financial interests of the Notifying Party, subject to the Notifying Party's unconditional obligation to divest at no minimum price in the Trustee Divestiture Period.
38. 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 Notifying Party.

III. Duties and obligations of the Notifying Party

39. The Notifying Party 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 the Notifying Party 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 the Notifying Party and the Divestment Business shall provide the Trustee upon request with copies of any document. The Notifying Party 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.
40. The Notifying Party 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. The Notifying Party 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. The Notifying Party shall inform the Monitoring Trustee on possible purchasers, submit lists of potential purchasers at each stage of the selection process, including the offers made by potential purchasers at those stages, and keep the Monitoring Trustee informed of all developments in the divestiture process.

41. The Notifying Party shall grant or procure Affiliated Undertakings to grant comprehensive powers of attorney, duly executed, to the Divestiture Trustee to effect the sale (including ancillary agreements), 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, the Notifying Party shall cause the documents required for affecting the sale and the Closing to be duly executed.
42. The Notifying Party 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 the Notifying Party 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.
43. At the expense of the Notifying Party, the Trustee may appoint advisors (in particular for corporate finance, costs analysis or legal advice) or an industry expert, subject to the Notifying Party's approval (this approval not to be unreasonably withheld or delayed) if the Trustee considers the appointment of such advisors or industry expert 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 the Notifying Party refuse to approve the advisors proposed by the Trustee the Commission may approve the appointment of such advisors instead, after having heard the Notifying Party. Only the Trustee shall be entitled to issue instructions to the advisors. Paragraph 42 of these Commitments shall apply *mutatis mutandis*. In the Trustee Divestiture Period, the Divestiture Trustee may use advisors who served the Notifying Party during the Divestiture Period if the Divestiture Trustee considers this in the best interest of an expedient sale.
44. The Notifying Party agrees that the Commission may share Confidential Information proprietary to the Notifying Party with the Trustee. The Trustee shall not disclose such information and the principles contained in Article 17 (1) and (2) of the Merger Regulation apply *mutatis mutandis*.
45. The Notifying Party agrees that the contact details of the Monitoring Trustee are published on the website of the Commission's Directorate-General for Competition and they shall inform interested third parties, in particular any potential purchasers, of the identity and the tasks of the Monitoring Trustee.

46. For a period of 10 years from the Effective Date the Commission may request all information from the Notifying Party that is reasonably necessary to monitor the effective implementation of these Commitments.

IV. Replacement, discharge and reappointment of the Trustee

47. If the Trustee ceases to perform its functions under the Commitments or for any other good cause, including the exposure of the Trustee to a Conflict of Interest:

- (a) the Commission may, after hearing the Trustee and the Notifying Party, require the Notifying Party to replace the Trustee; or
- (b) the Notifying Party may, with the prior approval of the Commission, replace the Trustee.

48. If the Trustee is removed according to paragraph 47 of these Commitments, the Trustee may be required to continue in its function until a new Trustee is in place to whom the Trustee has affected a full hand over of all relevant information. The new Trustee shall be appointed in accordance with the procedure referred to in paragraphs 26-33 of these Commitments.

49. Unless removed according to paragraph 47 of these Commitments, 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 G. Fast-track dispute resolution mechanism

50. Any disputes which may arise between the Notifying Party and the Purchaser (each a **Party** and jointly the **Parties**) in relation to the implementation of the Transitional Toll Manufacturing Agreement or the Transfer Support Commitment will be subject to the Fast-Track Dispute Resolution Procedure described in this Section G.

51. If a Party wishes to avail itself of the Fast-Track Dispute Resolution Procedure (the **Requesting Party**), it must notify the other Party in writing (with a copy to the Monitoring Trustee) setting out in detail the reasons leading that Party to believe that the other Party is failing to comply with the requirements of the Transitional Toll Manufacturing Agreement or the Transfer Support Commitment (the **Notice**). The Parties will use their best efforts to resolve all differences of opinion and settle all disputes that may arise through cooperation and consultation within a reasonable period of time which shall not exceed fifteen (15) business days after receipt of the Notice, which may be extended by mutual consent.

52. Should the Parties fail to resolve their differences of opinion through cooperation and consultation as provided for in the previous paragraph, the Requesting Party shall nominate an arbitrator.

53. The other Party shall, within two (2) weeks of receiving notification in writing of the appointment of the Requesting Party's arbitrator, nominate its arbitrator and provide to the Requesting Party in writing detailed reasons for their challenged conduct.

54. The arbitrators nominated by the Parties shall, within one (1) week from the nomination of the former, agree to appoint a third arbitrator. If the arbitrators nominated by the Parties cannot agree on the nomination of a third arbitrator, they shall ask the President of the International Chamber of Commerce (*ICC*) to appoint the third arbitrator.
55. The arbitrators shall be instructed to establish an arbitration tribunal and to make a preliminary ruling on the contested issues within one (1) month of the appointment of the third arbitrator, which may be extended, if necessary, by the unanimous agreement of all three arbitrators. The preliminary ruling shall be applicable immediately and until the final decision is issued. The final decision shall be taken by the arbitrators within six (6) months of the appointment of the third arbitrator, which may be extended, if necessary, by the unanimous agreement of all three arbitrators.
56. Any of the arbitrators shall be entitled to request any relevant information from the Parties in order to enable them to reach a decision.
57. The burden of proof in any dispute under the Fast-Track Dispute Resolution Procedure shall be borne as follows: (i) the Requesting Party must produce evidence of a prima facie case, and (ii) if the Requesting Party produces evidence of a prima facie case, the arbitrator must find in favour of the Requesting Party unless the other Party can produce evidence to the contrary.
58. The arbitrators shall be instructed not to disclose confidential information and to apply the standards attributable to confidential information and business secrets by European Community competition law.
59. The arbitration shall be in English and conducted pursuant to ICC rules. The arbitration award shall, in addition to dealing with the merits of the claim, impose the fees and costs of the prevailing party upon the party that is unsuccessful.
60. In the event of disagreement between the Parties regarding the interpretation of the Commitments, the arbitrators shall seek the Monitoring Trustee's interpretation of the Commitments, in accordance with the Decision, before finding in favour of any Party. The Monitoring Trustee and the Commission may, at any time, submit a proposal during the arbitration procedure.
61. Nothing in the arbitration procedure shall affect the powers of the Commission to take decisions in relation to the Commitments in accordance with its powers under the Merger Regulation and the EC Treaty.

Section H. The review clause

62. The Commission may extend the time periods foreseen in the Commitments in response to a request from the Notifying Party or, in appropriate cases, on its own initiative. Where the Notifying Party requests an extension of a time period, it shall submit a reasoned request to the Commission no later than one month before the expiry of that period, showing good cause. This request shall be accompanied by a report from the Monitoring Trustee, who shall, at the same time send a non-confidential copy of the report to the Notifying Party. Only in exceptional

circumstances shall the Notifying Party be entitled to request an extension within the last month of any period.

63. The Commission may further, in response to a reasoned request from the Notifying Party showing good cause waive, modify or substitute, in exceptional circumstances, one or more of the undertakings in these Commitments. This request shall be accompanied by a report from the Monitoring Trustee, who shall, at the same time send a non-confidential copy of the report to the Notifying Party. The request shall not have the effect of suspending the application of the Commitments and, in particular, of suspending the expiry of any time period in which the Commitments have to be complied with.

Section I. Entry into force

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

.....
duly authorised for and on behalf of
Solvay SA

SCHEDULE

A. Divestment commitment

1. The Divestment Business consists of:
 - a) the entirety of Solvay's phosphorous-based solvent extractants business for the extraction of cobalt from nickel in the form of Solvay's Ionquest 290 business (the ***Ionquest 290 Business***);and, at the option of the Purchaser:
 - b) the entirety of Solvay's business for the supply of [...].

The Ionquest 290 Business

2. The Ionquest 290 Business as operated to date has the following legal and functional structure:
 - a) the Ionquest 290 Business is currently owned and operated by Solvay; it is not incorporated separately; and
 - b) the Ionquest 290 Business is not currently a stand-alone business activity; the product is being produced on the Semi-Works Unit at Solvay's Oldbury (UK) site and is integrated into Solvay's wider operational and commercial organisation; it will therefore be separated from current operations as described below.
3. In accordance with paragraph 7(a) of these Commitments the Ionquest 290 Business includes
 - a) all know-how and technical documentation and assistance required for the production of Ionquest 290;
 - b) all IP rights, including Solvay's patent (US 7,049,463) regarding the process for the preparation of highly purified dialkyl phosphinic acid (a method for the removal of impurities by washing in the production of Ionquest 290);
 - c) the Ionquest trademark;
 - d) any other tangible or intangible assets, with the exception of any physical production assets, which the Purchaser may reasonably require to successfully complete the transfer of the Ionquest 290 Business to an alternative production location; and
 - e) the entirety of Solvay's Ionquest 290 customer portfolio, all current customer contracts, orders and records, as well as historic customer orders and records relating to Ionquest 290 dating back to 2006;
4. The Ionquest 290 Business will be divested together with a short-term toll-manufacturing arrangement (the ***Transitional Toll Manufacturing Agreement***), on the basis of which Solvay will produce Ionquest 290 on the Semi-Works Unit for

supply to the Purchaser in sufficient volumes allowing the Purchaser to maintain and expand Solvay's existing market position in Ionquest 290 until it has established an alternative production capability. The Transitional Toll Manufacturing Agreement will have the following characteristics:

- a) the Purchaser will grant Solvay a temporary licence for the use of the relevant intellectual property, know-how and technical documentation required for the production of Ionquest 290 on the Semi-Works Unit;
- b) Solvay will produce and supply sufficient volumes of Ionquest 290 allowing the Purchaser at the very least to maintain Solvay's existing market position in Ionquest 290 until it has established an alternative production capability, i.e. a minimum annual volume of 84 tons, with a "reserved capacity" provision for the production of an additional 50% of volume of Ionquest 290 (up to a total of 126 tons), allowing for sufficient growth potential;
- c) the Ionquest 290 shall be produced in accordance with the product specifications which will be determined in the Transitional Toll Manufacturing Agreement and will reflect the specifications currently used and quality currently supplied by Solvay for the production of Ionquest 290; any volumes of Ionquest 290 which do not meet these product specifications and quality requirements will be retained by Solvay at its own cost for recycling in the production process;
- d) Solvay will supply the Purchaser with the abovementioned volumes of Ionquest 290 in return for a fixed tolling fee for each tonne of Ionquest 290 off-taken by the Purchaser from the Semi-Works Unit which will compensate Solvay for the fixed costs that can be currently attributed to the production of Ionquest 290 and which will be fixed at the time of signing of the Transitional Toll Manufacturing Agreement for the duration of the agreement (subject to yearly indexation reflecting the rate of inflation);
- e) any variable costs such as utilities and, in so far as these are sourced by the Purchaser from or via Solvay, raw materials associated with the production of Ionquest 290 and incurred by Solvay will be compensated for by the Purchaser at cost;
- f) raw materials associated with the production of Ionquest 290 during the Toll Manufacturing Agreement and, if applicable, the transitional services detailed in paragraph 5 a) shall be of the specifications currently used and quality currently supplied;
- g) during the Toll Manufacturing Agreement, Ionquest 290 will be manufactured at the Semi-Works Unit in the Oldbury site (United Kingdom) under the same costs structure as it is currently produced;
- h) the term of the Transitional Toll Manufacturing Agreement will be 3 years, with the option for the Purchaser to extend the term by 1 year if it can demonstrate that such extension is required in order to complete the transfer of the Ionquest 290 Business to its own production location.

5. Under the Transitional Toll Manufacturing Agreement the Purchaser will have the option to request the provision on a cost basis of a number of transitional services to ensure the viability and competitiveness of the Ionquest 290 Business during the term of the Transitional Toll Manufacturing Agreement. These transitional services may include, among others:
 - a) the option to source the raw materials required for the production of Ionquest 290 from or via Solvay at cost (delivered to the Semi-Works Unit):
 - (i) [...], produced by Solvay at its Hengchang site in China;
 - (ii) [...], currently sourced by Solvay from third party suppliers;
 - b) certain additional transitional services, including storage and logistics support and any other services which the Purchaser may require during the term of the Transitional Toll Manufacturing Agreement in order to maintain the viability and competitiveness of the Ionquest 290 Business during that period.
6. At the option of the Purchaser, for a period of 3 years after the end of the Transitional Toll Manufacturing Agreement, Solvay will continue to supply the Purchaser with:
 - a) [...] to the Purchaser's premises on reasonable commercial terms, with the option for the Purchaser to extend the term by 2 years;
 - b) other raw materials required for the production of the products of the Divestment Business, if necessary by way of back-to-back agreement, at cost to the Purchaser's premises, if it can demonstrate to the satisfaction of the Monitoring Trustee and the Commission that it would not have access to such raw materials on the merchant market on reasonable commercial terms.
7. At the request of the Purchaser, Solvay will use its best efforts, including appropriate incentive schemes, to transfer any of the operational/production, industrial/technical and/or commercial Key Personnel listed in the Annex to these Commitments to the Purchaser.

[...] Business

8. The [...] Business as operated to date has the following legal and functional structure:
 - a) the [...] Business is currently owned and operated by Solvay; it is not incorporated separately; and
 - b) the [...] Business is not currently a stand-alone business activity; the product is being produced on the [...] Unit at Solvay's Oldbury (UK) site and is integrated into Solvay's wider operational and commercial organisation; it will therefore be separated from current operations as described below.

9. In accordance with paragraph 7(b) of these Commitments [...] Business includes:

- a) a perpetual, royalty-free licence for all know-how and technical documentation and assistance required for the production of [...];
- b) a perpetual, royalty-free licence for all IP rights regarding the composition of and manufacturing process [...];
- c) for a reasonably sufficient period of at least two years, a non-transferrable royalty-free licence for the use of [...] trademarks, it being understood that the Purchaser will have the perpetual right (at no cost) to use the relevant code numbers [...];
- d) any other tangible or intangible assets, with the exception of any physical production assets, which the Purchaser may reasonably require to successfully complete the transfer of the [...] Business to an alternative production location; and
- e) the entirety of Solvay's customer portfolio, all current customer contracts, orders and records, as well as historic customer orders and records relating to [...];

10. The Divestment Business will not include any physical production assets or manufacturing units owned or operated by Solvay.

B. The Transfer Support Commitment

11. The Notifying Party commits to provide, at no cost and until 6 months after the Purchaser has produced the first batch of the relevant product on its production unit, any support which the Purchaser may reasonably request to ensure an effective transfer of the Divestment Business to its own production location by the end of the Transitional Toll Manufacturing Agreement. More specifically, Solvay commits to provide the Purchaser at its request with the following support and/or training, including by means of a temporary secondment of any of the relevant Solvay's personnel:

- a) support for the design and the commissioning of a new production facility for the production of Ionquest 290 and any other relevant product (e.g. [...]) and [...]) or the adjustment of an existing production facility at the Purchaser's premises, on the basis of the know-how and technical documentation included in the Divestment Business;
- b) technical training to the Purchaser's personnel in relation to the production of Ionquest 290 and, to the extent the Purchaser opts to acquire the [...] Business, [...]), and any other aspects regarding the operation and maintenance of the relevant production assets; and
- c) training with respect to the marketing/commercialisation of Ionquest 290 and, to the extent the Purchaser opts to acquire [...] Business; [...].

12. In addition, the Notifying Party commits to provide during a period of 24 months following the end of the Transitional Toll Manufacturing Agreement, at no cost,

support in the context of customer qualification proceedings for Ionquest 290 which the Purchaser may need to undergo following the transfer of the Ionquest 290 Business. In particular, this support shall consist of the provision by Solvay of any data or information which a customer may require to compare the Purchaser's Ionquest 290 product offering with Solvay's historic offering and will be limited to Solvay's historic or existing customers, i.e. those customers for which a contract, order or record has been transferred to the Purchaser as part of the Ionquest 290 Business, as well as all the Purchaser's customers at the date of the end of the Transitional Toll Manufacturing Agreement.

ANNEX

KEY PERSONNEL

[...]