

***Case No COMP/M.3060 -  
UCB / SOLUTIA***

Only the English text is available and authentic.

**REGULATION (EEC) No 4064/89  
MERGER PROCEDURE**

---

Article 6(1)(b) NON-OPPOSITION  
Date: 31/01/2003

*Also available in the CELEX database  
Document No 303M3060*



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 31/01/2003

**SG (2003) D/228335**

In the published version of this decision, some information has been omitted pursuant to Article 17(2) of Council Regulation (EEC) No 4064/89 concerning non-disclosure of business secrets and other confidential information. The omissions are shown thus [...]. Where possible the information omitted has been replaced by ranges of figures or a general description.

PUBLIC VERSION

MERGER PROCEDURE  
ARTICLE 6(1)(b) DECISION

**To the notifying party**

Dear Sir/Madam,

**Subject: Case No COMP/M.3060 - UCB / SOLUTIA  
Notification of 23.12.2002 pursuant to Article 4 of Council Regulation  
No 4064/89<sup>1</sup>**

1. On 23.12.2002, the Commission received a notification of a proposed concentration by which the undertaking UCB S.A., Belgium, acquires within the meaning of Article 3(1)(b) of the Council Regulation sole control of the resins, additives and adhesives businesses of Solutia Inc., USA.
2. After examining the notification, the Commission has concluded that the notified operation falls within the scope of the Merger Regulation and that does not raise serious doubts as to its compatibility with the common market.

**I. THE PARTIES**

3. UCB S.A. (UCB hereafter) is a Belgian company active mainly in the following fields: (i) pharmaceuticals, (ii) performance films employed in a wide range of packaging applications, adhesive tapes, plastic mouldings, etc., and (iii) speciality chemicals, mainly resins for coatings and adhesives. UCB shares are traded on the Euronext stock exchange.
4. Solutia, Inc (Solutia hereafter) is an American company who produces and sells high performance chemical materials and is organised along three main business lines: (i) performance films, (ii) speciality products, which includes, among others, resins, adhesives and additives, and (iii) nylon products and intermediate precursors. Solutia was spun-off Monsanto Company in 1997 and is now publicly traded on the New York stock exchange.

---

<sup>1</sup> OJ L 395, 30.12.1989 p. 1; corrigendum OJ L 257 of 21.9.1990, p. 13; Regulation as last amended by Regulation (EC) No 1310/97 (OJ L 180, 9. 7. 1997, p. 1, corrigendum OJ L 40, 13.2.1998, p. 17).

## II. THE OPERATION AND THE CONCENTRATION

5. Pursuant to a stock and asset purchase agreement executed by the parties on 2 December 2002, UCB will acquire sole control of Solutia's businesses for the production, manufacture and sale of resins, additives and adhesives ("the acquired business"), by way of purchase of shares and of assets, thus constituting a concentration within the meaning of Article 3(1)(b) of the Council Regulation.

## III. COMMUNITY DIMENSION

6. The worldwide turnover of UCB in the financial year 2001 was € 2,475 million and the worldwide turnover of the acquired business for the year 2001 was € 638 million. The combined worldwide turnover of the parties is above € 2,500 million. In addition, the combined turnover of the parties is in excess of € 100 millions in six Member States. In four of them, France, Germany, Italy and Spain, both UCB's and the acquired business' turnovers are above € 25 million. Lastly, the EEA-wide turnover of UCB is € [...] million and the one of the acquired business is € [...] million. As none of the parties achieved more than two thirds of his EEA turnover in a single Member State, the concentration has a Community dimension pursuant to the Article 1(3) of the Merger Regulation.

## IV. COMPETITIVE ASSESSMENT

### *Relevant Product and Geographic Markets*

7. Although the concentration will result in several horizontal and vertical overlaps, only two markets will be affected (combined market share over 15 %) by the transaction. Both are related to the coating resins activities of the parties, which are the main raw material for manufacturing coatings.
8. Coatings are used essentially in three sectors: graphic arts, paints and industrial coatings for manufactured goods. They can be separated into four groups: solvent-based coatings, water-based coatings, powder coatings and radiation-curable coatings. These different types of coatings differ on their production process, on the way they are applied and the residue they leave after application. They consequently differ substantially from both a supply-side and a demand-side perspective.
9. Resins are essential elements of the coatings formulation, as they determine the performance characteristics of the coatings, such as weathering, detergent and corrosion resistance, gloss, durability, smoothness and flexibility. The parties are active in the manufacturing and the sale of resins. They are absent from the up-stream raw materials market and are relatively small players in the down-stream coating industry.
10. Two markets will be affected by the combination of the parties' activities : polyester resins for powder coatings and radiation-curable acrylate resins for liquid coatings.

#### **i. Polyester resins for powder-coating ("PE PCR")**

11. Powder coatings are applied for decorative and protective purposes in the general metal industry, for domestic appliances, furniture, architectural and automotive components. The powder is sprayed onto the substrate to be coated by means of an electrostatic spray gun. The coating is subsequently cured by passing the coated object through an oven. Powder coatings can be to some extent substituted by liquid coatings (both solvent and

water based). Powder coatings are environmentally superior as they are solvent free and have the advantage of producing no waste.

12. Resins represent approximately 50 % of the value of powder coatings. Several type of synthetic resins can be used for formulating powder coatings : epoxy, acrylic, polyurethane, polyester and hybrids of polyester and epoxy.

*Product market definition*

13. The parties have submitted that all the grades of polyester resins for the production of powder coatings are part of the same product market, as they are technically fully substitutable from a supply-side perspective. Indeed all PE PCR are manufactured in polycondensation reactors where components are stirred and heated before being cooled and solidified. Components, reaction temperature and reaction time vary according to the performance and applicability characteristics of the final coating. Both UCB and Solutia produce large numbers of grades (UCB: [...], Solutia: [...]) flexibly in a limited number of reactors. The production process is a batch process: a certain type of resin is produced in a reactor for a given time, typically 30 hours, and then another type of resin will be produced in the same reactor. All the PE PCR producers use the same production technique which is widely available and used also for liquid polyester resins and alkyd resins.
14. A further distinction could be considered between PE PCR for indoor and outdoor applications. The main reason that could lead to such a delineation is that coating formulators (the manufacturers of coatings) request extensive testing of the resins used for outdoor applications in order to assess their weather and sun resistance. Two main standard qualification processes are used in the industry, and both of them require a time period of nearly 15 months to finally approve a resin intended for outdoor applications<sup>2</sup>. As a consequence, a PE PCR manufacturer who has not registered products for outdoor applications cannot switch production from indoor to outdoor applications over a short time period. Even if the cost of qualification, which is according to the parties in the range of € 3000-5000, is not a deterrent to switch from indoor to outdoor applications resins productions, switching time considerations could distinguish outdoor applications resins from indoor ones. However, most producers within Western Europe are qualified for outdoor applications, which would make such a distinction irrelevant.
15. Regarding a further distinction between different grades of PE PCR according to their final intended applications, such as automotive components, furniture or domestic appliances, the product market should not be fragmented in this way, as resins are generally not developed for an specific industry usage and can be used for several alternative applications. Furthermore, the supply-side substitutability overrides such application considerations.
16. The Commission's market investigation has largely confirmed that powder coating resins are not substitutes either for liquid (water-borne or solvent-borne) or for radiation curable coating resins.

---

<sup>2</sup> For outdoor applications there is a pre-qualification process that allows the manufacturers to supply the resin and which usually takes less than 3 months.

17. Furthermore, the market investigation has shown that PE PCR constitutes a market distinct from other resins for powder coatings such as epoxy, acrylic or polyurethane due to their different properties, prices and uses.
18. Regarding the further distinction between indoor and outdoor applications, the market investigation was not decisive. However it is not necessary to decide whether indoor or outdoor powder coatings are separate relevant product markets as the present concentration does not give rise to competition concerns under any of the possible market definitions.
19. The market investigation has also shown that it is not appropriate to consider a further distinction for PE PCR according to their final application, thus only three possible markets will be considered: all PE PCR, PE PCR for indoor applications and PE PCR for outdoor applications.

#### *Geographic market definition*

20. In the parties' opinion, all the possible PE PCR markets are at least western Europe wide. They put forward the significant trade flows in Europe, most producers have a single production facility that serves the whole of western Europe, price uniformity across the area and the low level of transport costs, estimated at 5 % of the sales price to formulators (the manufacturers of coatings).
21. This approach is consistent with the previous decisions of the Commission<sup>3</sup>. Market investigation has confirmed the significance of the trade flows within western Europe and the low level of the transport costs. The investigation has also shown that prices are reasonably uniform across western Europe. In addition, market investigation has proved that there is a low level of imports from outside Western Europe. As a consequence, the markets for PE PCR, whether overall, indoor or outdoor applications, are considered to be western Europe.

#### **ii. Radiation-curable acrylate resins for liquid coatings (“RCAR”)**

22. In radiation curing, a reactive coating material is applied to the substrate and then made to polymerise by exposure to radiation such as ultraviolet (UV) or an electron beam (EB). This coating technology has the advantage that curing takes a very short period of time, which makes it particularly efficient. In addition it is more environmentally friendly than traditional liquid coatings as it is solvent-free, and, as it does not require exposure to high temperatures over a long period of time, it can be applied to substrates such as wood and plastic, where powder coatings cannot be applied<sup>4</sup>. Radiation-curable coatings have two main applications : graphic arts and industrial applications.
23. Three chemistries are used for formulating radiation-curable coatings: acrylates, which are the more commonly used and account for 75 % of all radiation curable resins sales in

---

<sup>3</sup> Case COMP.M 1763 Solutia/Viking Coatings ; Case COMP.M 1467 Rohm & Hass/Morton ; Case COMP/M.1182 Akzo Nobel / Courtaulds ; Case COMP.M 1097 Wacker/Air Products

<sup>4</sup> Powder coatings require high temperature exposure over a long period of time to be cured, and therefore can only be applied to substrates capable of withstanding high temperatures (metals and certain architectural components, claddings for example).

Europe; unsaturated polyesters, which account for 24% of the sales and where only Solutia is active; and cationic curable resins which account for 1% and where only UCB is active.

24. Regarding acrylates, different “oligomeric backbones” are used to produce acrylate resins: polyester, amino, epoxy, urethane, and polyether.

#### *Product market definition*

25. The parties claim that amino, epoxy and urethane resins display a high-level of supply-side substitution and therefore should be grouped into a single product market. This supply-side substitutability stems from the fact that all three resins are produced in batch runs in the same reactors through a polyaddition process. Switching of product occurs several times a month. However these different resins are not fully substitutable from a demand-side perspective because of significant differences in their performance characteristics and applicability.
26. A further distinction according to the final use of the resins could be considered for graphic arts, where only UCB is active, and for industrial applications, although the parties submit that these segments do not define separate markets.
27. Most of the respondents to the Commission’s market investigation have confirmed that RCAR constitutes a single relevant product market. However it is not necessary to decide whether RCAR, unsaturated polyester and cationic curable resins or further distinctions for RCAR constitute separate relevant product markets as the present concentration does not give rise to competition concerns under any of the possible market definitions.

#### *Geographic market definition*

28. Applying the same arguments as for PE PCR, the parties submit that significant cross-border trade flows within Europe, marginal transportation costs of less than 5% and price uniformity over the EEA, leads to the conclusion that Western Europe is the relevant geographic market for RCAR.
29. This definition has been largely confirmed by the market investigation.

#### **Competitive Effects**

##### **i. Polyester resins for powder-coating resins**

30. Solutia sold M€ [...] of PE PCR resins in 2002, which represents [...] % of the sales of the acquired business.
31. The parties sell almost their entire production of PE PCR to third parties, however, some suppliers of PE PCR like such as Akzo Nobel are vertically integrated downstream and therefore do not sell their production on the free market. In such circumstances, the Commission usually restricts its assessment to the free market, i.e. excludes captive sales. However, for the purpose of this case, the competitive pressure exerted by the vertically integrated suppliers downstream should be taken into account for assessing the PE PCR markets. Indeed, the coating products of these suppliers are in direct competition with those of the polyester powder coatings manufacturers who buy on the merchant market. As resins represent half of the production costs of polyester powder

coatings, the cost of PE PCR has a large impact on the competition in the polyester powder coatings market and therefore on the demand for PE PCR. This implies that internal sales of vertically integrated PE PCR suppliers should be considered to have a restraining effect on the behaviour of the suppliers selling on the merchant market.

32. Limiting the overall PE PCR market to the free market, UCB market share<sup>5</sup> is [10-20] % and Solutia's [20-30] %. Their main competitor would be DSM with [30-40] %, whereas two smaller players are active on the free market each with market shares between [5-10] and [10-15] % : Eastman and Cray Valley.
33. If captive sales are fully taken into account, UCB market share is [15-25] % and Solutia's [20-30] %. Their main competitor would be DSM with [25-35] %, whereas Eastman, Cray Valley and Akzo Nobel have each market shares between [5-10] and [10-15] %.
34. On the basis of sales related to indoor applications only, UCB market share is [10-20] % and Solutia's [30-40] %, whereas for their competitors, DSM market share is [10-20] %, Eastman [10-20] %, and Akzo Nobel and Cray Valley market shares are each below [5-15] %.
35. On the basis of sales related to outdoor applications only, UCB market share is [20-30] % and Solutia's [10-20] %, whereas for their competitors, DSM market share is [30-40] %, Akzo Nobel [10-20] %, and Eastman and Cray Valley market shares are each below [5-15] %.

#### *Excess production capacity in Western Europe*

36. PE PCR can be regarded to some extent as homogeneous products: even if the performance characteristics and the application process of the different PE PCR grades vary, the know-how necessary to produce them and the production process in itself vary little according to the grades. From a supply-side perspective, it should be noted that all the major players sell PE PCR for all possible applications, and are to a large extent able to produce any PE PCR resin currently existing on the market, even if they are not currently producing them. Indeed, production capacity is not allocated to a specific grade but can be used to produce all grades. From a demand-side perspective, market investigation has shown that for most applications, each customer has the choice between several grades from each supplier. Furthermore many clients actually qualify one or more alternative suppliers to reduce their dependency on a given supplier. In any event, it is usually estimated that a maximum time of one year is necessary to switch from the current supplier to a non qualified one. It is often much less.
37. Production capacity and its utilisation are therefore the most important parameters to consider when evaluating the competitive position of the market players. In this respect, UCB has [10-20] % of the capacity installed in Western Europe and Solutia's has [20-30] % of this capacity, whereas for their competitors, DSM has [30-40] %, and Eastman, Cray Valley and Akzo Nobel each have less than [5-15] % of the installed capacity.
38. According to market investigation, the actual free capacity on the market represented 22 % of the total capacity installed in Western Europe in 2002. In addition, several

---

<sup>5</sup> These market shares estimations are based on volumes sold in 2002

manufacturers are committed or are planning to increase capacity, whether by building up new capacities or by improving productivity. Market investigation has shown that the capacity increase will be in line with the expected growth of the market, between 3 % and 5 % per year, and therefore current excess capacity is likely to be maintained in the foreseeable future.

39. The Commission's market investigation has shown that, were the currently decreasing PE PCR prices to stabilise or to increase in Europe, several customers would seek quotations from non-European based suppliers and several non-European suppliers have indicated they would be ready to ship PE PCR to Europe. [...].
40. These elements show that there is a large excess production capacity in Europe, and that this excess capacity will remain at least in the short and medium term. It should also be noted that this excess capacity is available for both indoor and outdoor grades : production capacity is not dedicated to indoor or outdoor applications, as in each reactor every existing grade can and is actually produced.

#### *Single dominance*

41. According to the parties, there is no risk that the transaction would lead to the creation of a single firm dominant position. The main elements put forward are (i) the strength of their competitors, (ii) the lack of excess capacity of UCB/Solutia in contrast to their competitors, (iii) the ease of entry, whether by imports from outside the EEA, by the building of new capacities from scratch, or by transforming existing liquid polyester or alkyd resins production facilities into PE PCR production facilities ; (iv) customers' bargaining power due to their small number and their capacity to promote competition at the supply level by reverse engineering resins.
42. If UCB and Solutia restrict output or increase prices, there are established competitors with an adequate knowledge and with excess production capacity to whom customers can turn to. In the most difficult cases, it is estimated that one year would be needed to switch supplier. In addition, the parties' competitors have incentives to utilise their production facilities, as fixed costs represent up to [20-40] % of the PE PCR sales price and therefore increased utilisation of the production facilities has significant financial benefits. The parties estimated that a 5 % price rise would be unprofitable as soon as their volume loss reached [10-20] %, which would have represented around [...] kT in 2002 (critical loss analysis).
43. The Commission market investigation has shown that the free capacity of the main competitors of the parties [is in aggregate approximately 43 kT, which represents 18% of the overall capacity of the market] . Increasing production volume while maintaining current prices would be profitable for the parties' competitors in this industry which depicts increasing returns to scale, at least as far as suppliers are not capacity constrained. Therefore any attempt of raising prices or decreasing quantities would be an opportunity for the parties' competitors to increase profits and, given their available excess production capacity, their reaction to such a move would make unprofitable the action of the parties. Therefore single dominance on the general PE PCR market can be discarded.

44. If the indoor and outdoor PE PCR markets are assessed on a separate basis, single dominance issue could only arise in the indoor market, where the parties' combined market share is [40-50] % and the second player, DSM, will only have [20-30] %<sup>6</sup>. However, the same reasoning as for the general PE PCR market can be applied : the available excess capacity in Western Europe shows that any attempt to increase prices or to restrict output would benefit to the parties' competitors who would increase their production volume. Indoor applications require very limited or no qualification in comparison with the qualification process required for PE PCR for outdoor applications and therefore customers can switch supplier quickly and easily.

#### *Collective dominance*

45. The parties also discount the possibility that the transaction would result in a joint dominant position of both UCB/Solutia and DSM. The main arguments put forward are that this industry is not transparent, as there is a wide range of resins and as prices are negotiated individually with customers rather than published and are, furthermore, subject to various rebates. In addition, asymmetry of market shares, differences in the level of vertical integration, ease of entry, low marginal costs favouring capacity utilisation and customers' strength are mentioned as elements mitigating against collective dominance.

46. The market investigation has confirmed these arguments. In particular, prices and quantities appear not to be observable as they result from private negotiations held between suppliers and customers on a yearly or half-yearly basis. These prices also vary for each grade and are frequently subject to volume and other discounts. All these elements show that it is difficult for a supplier to monitor the behaviour of the other PE PCR suppliers on the market. Indeed, no element has been identified as being able to facilitate communication between market players. No deterrent mechanism can be conceived, as, even if one of the colluding party could identify a break of the tacit agreement, the transgressing party would not be aware of its punishment. As monitoring, detection of deviation and retaliation are inherently difficult to implement because of the industry characteristics, tacit co-ordination should not be considered further.

47. If the indoor and outdoor PE PCR markets are assessed on a separate basis, collective dominance issue could only arise in the outdoor market, where the parties' combined market shares are [30-40] % and the single other large player, DSM, will have [30-40] %. However, transparency for outdoor PE PCR applications is no different to that for the overall market, and therefore any concern that the concentration would lead to tacit collusion can be discarded, as, because of the industry's characteristics, it is difficult to conceive how monitoring of other suppliers behaviour, detecting of deviations and retaliation can be implemented.

#### **ii. Radiation-curable acrylate for liquid coatings**

48. Solutia sold M€ [...] of radiation curable resins in 2001, which represents [...] % of the sales of the acquired business.

---

<sup>6</sup> In the outdoor market, the parties' combined market share are [30-40] % and DSM one is [30-40] %.

49. In order to properly assess the RCAR market, the parties have considered three different possible market definitions for RCAR: (i) all acrylate resins combined, (ii) amino, epoxy and urethane acrylates combined, and (iii) amino, epoxy and urethane acrylates for industrial coatings.
50. The following tables show the parties' market shares in Western Europe for the different possible markets laid out in section IV (ii):

*Western Europe Radiation Curable Resins market (2001)*

<b>Chemistries</b>	<b>UCB</b>	<b>Solutia</b>	<b>UCB</b>	<b>Solutia</b>
Acrylates	[30-40]%	[<5]%	[40-50]%	[<5]%
Unsaturated polyester			[<5]%	[<5]%
Cationic curable resins			[0-10]%	[<5]%

51. If the market of all radiation curable resins is considered, the market share achieved by the parties after the transaction is [30-40]%, with an overlap of [<5]%. Were this market to be considered as constituting three separate relevant product markets according to the chemistry employed, then only on the acrylates market there would be an overlap, with a market share after transaction of [40-50]% (UCB [40-50]%; Solutia [<5]%).

*Acrylates market in Western Europe (2001)*

<b>Resins</b>	<b>All applications</b>		<b>Industrial applications</b>		<b>All applications</b>	
	<b>UCB</b>	<b>Solutia</b>	<b>UCB</b>	<b>Solutia</b>	<b>UCB</b>	<b>Solutia</b>
Amino	[40-50]%	[<5]%	[30-40]%	[<5]%	[50-60]%	[<5]%
Epoxy					[40-50]%	[<5]%
Urethane					[30-40]%	[<5]%
Polyester	[40-50]%	[<5]%	[10-20]%	[<5]%	[40-50]%	[<5]%
Polyether	0%	[0-10]%			[<5]%	[0-10]%

52. If we consider the polyester, polyether and the combined amino, epoxy and urethane segments as distinct markets, then in the polyether market there would not be overlap and in the polyester and the combined amino, epoxy and urethane markets this overlap would be minimal ([<5]%) in both cases).
53. If narrower definitions of the relevant product markets based on the type of resin employed are considered, the polyether market would not be affected, and in the rest of markets the overlap is negligible for amino ([<5]%) and epoxy ([<5]%), and small for urethane ([<5]%) and polyester ([<5]%).
54. Finally, if the market is further subdivided into graphic arts and industrial applications, only the latest should be considered since it is the only segment where both Solutia and UCB are active. In this case, the market share after the operation would be [30-40]%, for the combined amino, epoxy and urethane resins, with an overlap due to Solutia activities of [<5]%, and [10-20]%, for polyester resin (UCB [10-20]%; Solutia [<5]%).
55. There are several other suppliers of acrylates radiation-curable resins, such as Cray Valley ([10-20]%), BASF ([10-20]%), Akzo Nobel ([0-10]%), Cognis ([<5]%) and Rahn ([<5]%), and a number of smaller competitors.

56. The market investigation as shown that the customers consider various of the parties' competitors as viable alternative suppliers. Change of supplier can involve sometimes reformulation work with the new supplier and trials of the final coating with the new resin, but in most of the cases this can be carried out within no more than one year.
57. In the light of the above, although there are high market shares, given the small increment represented by the addition of the acquired business to the UCB's radiation curable resins business under whatever definition for the relevant product market and the existence of competitors which will ensure the competitiveness within them, the transaction does not give rise to competition concerns in this market.

## **V. CONCLUSION**

58. For the above reasons, the Commission has decided not to oppose the notified operation and to declare it compatible with the common market and with the EEA Agreement. This decision is adopted in application of Article 6(1)(b) of Council Regulation (EEC) No 4064/89.

For the Commission

Signed by Mario MONTI  
Member of the Commission