

EN

***Case No COMP/M.6178 -  
ARKEMA / TOTAL'S  
RESIN DIVISION***

Only the English text is available and authentic.

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

---

Article 6(1)(b) NON-OPPOSITION  
Date: 29/04/2011

***In electronic form on the EUR-Lex website under document  
number 32011M6178***



## EUROPEAN COMMISSION

Brussels, 29.04.2011

C(2011) 3031 final

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 Where possible the information omitted has been replaced by ranges of figures or a general description.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

**Subject: Case No COMP/M. 6178 - ARKEMA / TOTAL'S RESIN DIVISION  
Commission decision pursuant to Article 6(1)(b) of Council Regulation  
No 139/2004<sup>1</sup>**

1. On 25.03.2011, the European Commission received notification of a proposed concentration pursuant to Article 4 of the Merger Regulation by which the undertaking Arkema SA ('Arkema', France) acquires within the meaning of Article 3(1)(b) of the Merger Regulation sole control over the Photocures and Coating businesses and certain related activities ('Total's Resin Division') of Total SA ('Total', France) by way of purchase of shares and assets<sup>2</sup>. Arkema is designated hereinafter as the notifying party.

#### **I. THE PARTIES**

2. Arkema is active worldwide in the production, distribution and sale of chemical products. Arkema's activities are organized around three businesses: (i) vinyl products; (ii) industrial chemicals and (iii) performance products. Arkema was created in 2004 from the reorganization of Total's chemical branch.
3. Total's Resin Division is constituted by entities and assets from various direct and indirect subsidiaries of Total belonging to three distinct divisions: Cray Valley, Sartomer and Cook Composites and Polymers ("CCP"). The related activities include the composites business

---

<sup>1</sup> 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.

<sup>2</sup> Publication in the Official Journal of the European Union No C105, 05.04.2011, p.8.

in certain African countries and the hydrocarbon speciality chemical ("HSC") rubber activities. Total's Resin Division is active in the production, distribution and sale of resins, principally in Europe, the US and Asia.

## **II. THE OPERATION**

4. On 16 November 2010, Arkema signed and sent to Total a Binding Offer Letter. On 6 December 2010, Arkema reiterated its binding offer by signing a Confirmatory Letter. The same day, Total signed Annex 7 of the Binding Offer Letter and thereby formally (i) acknowledged that Arkema's binding offer "*constitutes a reasonable basis for considering the transaction envisaged therein*" and (ii) granted Arkema an Extended Exclusivity Period until 30 June 2011. On this basis, the parties negotiated the draft Share and Asset Sales Agreement, according to which, Arkema will acquire sole control of Total's Resin Division, through the acquisition of 100% of the equity of different entities and the assets currently owned by direct or indirect subsidiaries of Total, within the Cray Valley's, Sartomer's and CCP's divisions.

## **III. CONCENTRATION**

5. Arkema will acquire sole control of Total's Resin Division, therefore the proposed transaction constitutes a concentration within the meaning of Article 3(1)(b) of the Merger Regulation.

## **IV. EU DIMENSION**

6. The undertakings concerned have a combined aggregate world-wide turnover of more than EUR 5 000 million<sup>3</sup>(Arkema: EUR 4 444 million; the Target: EUR 853 million). Each of them has an EU-wide turnover in excess of EUR 250 million (Arkema: EUR 2 276 million; the Target: EUR 477 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 an EU dimension pursuant to Article 1(2) of the Merger Regulation.

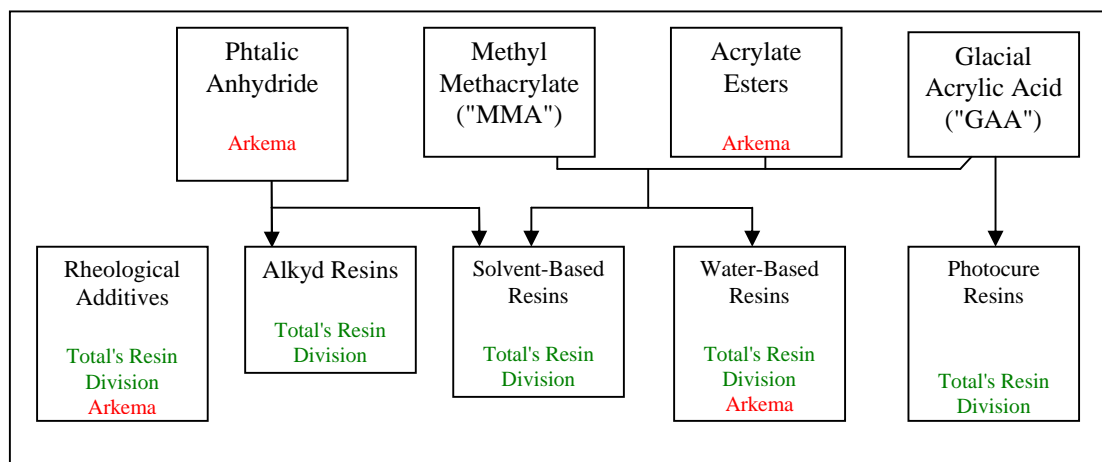
## **V. COMPETITIVE ASSESSMENT**

7. The activities of Arkema and Total's Resin Division give rise to horizontal overlaps and vertical links within the chemical sector as follows:

---

<sup>3</sup> Turnover calculated in accordance with Article 5 of the Merger Regulation.

**Diagram showing the horizontal and vertical relationships between Arkema and Total's Resin Division:**



8. In particular, both Arkema and Total's Resin Division are active in (i) the water-based resins sector and (ii) the rheological additives sector.

9. Moreover, there are vertical links between:

- (i) Arkema's upstream production of glacial acrylic acid (GAA) and Total's Resin Division's downstream production of water-based resins, solvent-based resins and photocure resins,
- (ii) Arkema's upstream production of acrylate esters - namely butyl acrylate (BA), ethyl acrylate (EA) and 2-ethylhexyl acrylate (2-EHA) – and Total's Resin Division's downstream production of water-based resins and solvent-based resins,
- (iii) Arkema's upstream production of methyl methacrylate (MMA) and Total's Resin Division's downstream production of water-based resins and solvent-based resins<sup>4</sup>, and
- (iv) Arkema's upstream production of phtalic anhydride ("PA") and Total's Resin Division's downstream production of solvent-based resins and alkyd resins<sup>5</sup>.

<sup>4</sup> The notifying party submits that since it had *de minimis* sales of MMA on the EEA merchant market in 2010 (and anticipates a further decrease in the upcoming years) and Total's Resin Division had market shares below 5% in 2010 in the EEA on the markets of water-based resins and solvent-based resins, the vertical integration between Arkema's production of MMA (upstream) and Total's Resin Division's production of water-based resins and solvent-based resins (downstream) does not give rise to any affected markets in the EEA. Therefore this vertical link will not be considered further below.

<sup>5</sup> The notifying party submits that since it has a market share below 25% (approximately [5-10%]) in the EEA on the merchant market of PA and Total's Resin Division has market shares below 25% (and in fact below [10-20%]) in the EEA on the markets of solvent-based resins and alkyd resins, the vertical integration between Arkema's production of PA and Total's Resin Division's production of solvent-based resins and alkyd resins does not give rise to any affected markets in the EEA. Therefore this vertical link will not be considered further below.

10. The last two vertical links will not be discussed further, as they do not give rise to any affected markets and therefore raise no competition concerns

## A. Relevant markets

### (1) Resins

#### *Product markets*

11. Resins are small spherical polymer beads used in synthetic chemistry which may be in natural or synthetic forms. Resins are mainly used for coating applications, but also as binders in the production process of papers, carpets, textiles and inks. Resins are essential elements in the chemical composition and formulation of the coatings since they determine to a large extent the coating's performance characteristics (durability, detergent and corrosion resistance, gloss, weathering, smoothness, flexibility, etc.).
12. The Commission has identified four "groups" of resins for coatings, namely resins for (a) water-based coatings, (b) solvent-based coatings, (c) powder coatings and (iv) radiation-curable coatings<sup>6</sup>. These different groups of coatings differ substantially from both a supply-side and a demand-side perspective.
13. As resins are the main raw materials for manufacturing coatings, the notifying party suggests distinguishing different types of resins according to a similar segmentation: (a) water-based resins, (b) solvent-based resins, (c) photocure resins and (d) alkyd resins.
- Water-based resins
14. Water-based resins are emulsions of resins in an aqueous medium. They are produced through the polymerization of one or more monomers, including butadiene, styrene, methyl methacrylate, ethyl acrylate, 2-ethylhexyl acrylate, butyl acrylate, vinyl acetate or ethylene. The main categories of water-based resins (by chemical composition) are acrylic, vinyl, styrene butadiene and polystyrene latexes.<sup>7</sup>
15. Following the Commission's decisional practice<sup>8</sup>, the notifying party submits that water-based resins can be segmented according to their chemical composition and end-use application.
- Solvent-based resins
16. Solvent-based resins are film-forming chemical products used mainly in the production of coatings, but also in the production of inks, adhesives and sealants. In the context of

---

<sup>6</sup> Commission decision of 31 January 2003 in Case COMP/M.3060 – *UCB / Solutia*, paragraphs 7 and 8.

<sup>7</sup> Also called "latices"; the term "latex" for purposes of the proposed transaction means a waterborne dispersion of polymer particles.

<sup>8</sup> Commission decision of 8 January 2009 in Case COMP/M.5424 - *Dow / Rohm and Haas*, paragraphs 183 and 184: "the market investigation has confirmed that the segmentation according to the type of dispersion and also the application is the one most commonly used within the latex industry". See also Commission decision of 12 March 2009 in Case COMP/M.5355 - *BASF / CIBA*, paragraph 167; and Commission decision of 20 July 2000 in Case COMP/M.1993 - *Rhodia / Raisio / JV*, paragraph 21.

coatings, solvent-based resins are used to bind various particles into a coherent film, enabling the coating to adhere to the product to which it is applied.

17. In its previous decisions, the Commission has suggested that solvent-based resins and water-based resins were part of different relevant product markets<sup>9</sup>. The notifying party submits that the proposed transaction should be assessed on the basis of a separate relevant product market for solvent-based resins, with a possible further segmentation by chemical composition and end-use application.

– Photocure resins

18. Photocure resins<sup>10</sup> can be distinguished from other types of resins due to their specific properties that enable them to remain entirely in the cured and applied formulated coating, adhesive or other product (as opposed to water-based resins and solvent-based resins from which water and solvent are eventually removed when the formulation is applied).

19. In its previous decisions the Commission has analysed the market of radiation-curable resins with a possible segmentation according to the chemical composition and end-use application.<sup>11</sup> The notifying party agrees with this distinction.

– Alkyd resins

20. Alkyd resins are chemical products produced either via a fatty acid process or via a glycerid process. They are predominantly used for paints and coatings (approximately 95% of the total production), the remainder generally being used for printing inks.

21. In *Apollo/Akzo Nobel IAR*, the Commission has identified a separate product market for alkyd resins, possibly segmented between solvent-based and water-based alkyd resins<sup>12</sup>. The Commission has also indicated that "alkyd resins should not be further sub-segmented by applications"<sup>13</sup>.

*Conclusion on product markets*

22. For the purpose of the present case, the precise product market definition can be left open as no competition concerns arise under any alternative market definition.

---

<sup>9</sup> Commission decision of 31 January 2003 in Case COMP/M.3060 - *UCB / Solutia*, paragraph 16; Commission decision of 23 June 1997 in Case IV/M.933 - *ICI / Unilever*, paragraph 13; This distinction between solvent-based and water-based was also found to be appropriate with respect to alkyd resins in Commission decision of 29 May 2006 in Case COMP/M.4071 - *Apollo /Akzo Nobel*, paragraph 41.

<sup>10</sup> A generic term which, for the purposes of the proposed transaction, designates all curable resins, the bulk of which being radiation-curable resins

<sup>11</sup> Commission decision of 31 January 2003 in Case COMP/M.3060 - *UCB / Solutia*

<sup>12</sup> Commission decision of 29 May 2006 in Case COMP/M.4071 - *Apollo /Akzo Nobel*, paragraph 41.

<sup>13</sup> Commission decision of 29 May 2006 in Case COMP/M.4071 - *Apollo /Akzo Nobel*, paragraph 42.

### *Geographic markets*

23. The notifying party submits that the relevant geographic market for resins is EEA-wide. The notifying party submits that, in line with the Commission's decisional practice, the market could hardly be defined as worldwide due among others to the transportation costs.
24. In its previous decisions<sup>14</sup> in the context of latexes, the Commission has indeed considered the geographic scope of the water-based resins market to be EEA-wide.
25. The same conclusion applies for the other type of resins.

### (2) Rheological additives

#### *Product market*

26. Additives are chemical products which are added in small quantities to different compounds (coatings, printing inks, etc.) in order to modify their properties such as plasticity, rigidity, transparency and flexibility. Additives are generally distinguished according to their applicative function.
27. Rheological additives are additives that possess the characteristic of affecting the deformation and flow properties of the product to which they are added by acting as thickening or anti-settling agents. They constitute an important element in the formulation of coatings, but are also used in paints, inks, cosmetics, construction products, adhesives, etc.
28. The Commission has considered that a distinction can be made between rheological additives according to whether they are intended for water-based or solvent-based applications.
29. The Commission has also suggested that a further segmentation according to the additive's chemical composition (cellulosic, synthetic, inorganic, etc.) could be appropriate<sup>15</sup>.
30. The notifying party submits that rheological additives for water-based applications and rheological additives for solvent-based applications do not compete in any shape, and therefore constitute two separate markets.
31. The notifying party also submits that a segmentation based on the chemical composition of the additive (within each category of additives, i.e. for water-based and solvent-based applications) could be appropriate in certain instances.
32. For the purposes of the present case, the precise product market definition can be left open as no competition concerns arise under any alternative market definition.

---

<sup>14</sup> Commission decision of 12 March 2009 in Case COMP/M.5355 - *BASF / CIBA*, paragraphs 173 and 174.

<sup>15</sup> Commission decision of 8 January 2009 in Case COMP/M.5424 – *Dow / Rohm and Haas*, paragraph 220.

*Geographic market*

33. Following the Commission's decisional practice, the notifying party submits that the relevant geographic market for rheological additives is EEA-wide<sup>16</sup>.

(3) GAA

*Product market*

34. GAA is produced through a purification process which can be obtained either by crystallization or distillation. GAA is generally used in the manufacture of various products, including super absorbent polymers, polyacrylates, certain specialty acrylates, certain additives as well as acrylic copolymers for surface coatings, water treatment and textile applications.
35. The Commission has considered that it is not necessary to make a further segmentation of the GAA market<sup>17</sup>.
36. The notifying party agrees with this product market definition.

*Geographic market*

37. In its previous decisions the Commission considered the geographic market for GAA to be no wider than EEA because "customers have a clear preference to source GAA in the region where they are active"<sup>18</sup>. Moreover, the Commission noted that "there can be price differences between world regions for GAA". In any event, due to the absence of anticompetitive effects of the transaction, the Commission left the question open.
38. Following the Commission's decisional practice, the notifying party submits that with respect to GAA the proposed transaction should be assessed on the basis of a geographic market that is EEA-wide.

(4) Acrylate esters

*Product market*

39. Acrylate esters are produced through the esterification of crude acrylic acid with an alcohol, and provide colour stability, clarity, heat, ageing and weather resistance, and low temperature flexibility to the chemical compound to which they are added. Acrylate esters can be used in the production process of various chemical products, including resins.

---

<sup>16</sup> Commission decision of 8 January 2009 in Case COMP/M.5424 – *Dow / Rohm and Haas*, paragraph 222.

<sup>17</sup> Commission decision of 8 January 2009 in Case COMP/M.5424 – *Dow / Rohm and Haas*, paragraph 20.

<sup>18</sup> Commission decision of 8 January 2009 in Case COMP/M.5424 – *Dow / Rohm and Haas*, paragraph 22.



40. In its previous decisions, the Commission has considered that the acrylate esters BA, EA and 2-EHA, which are produced through the esterification of crude acrylic acid with respectively butanol, ethanol, and 2-ethyl hexanol constitute distinct product markets<sup>19</sup>.
41. The notifying party agrees with this product market definition.

*Geographic market*

42. In its previous decisions, the Commission noted that although “BA and the other acrylate esters [...] are commodity products that are traded on a global basis and do not vary between suppliers in terms of chemical properties (...), there are price differences between Europe and other world regions (although not within Europe) due to factors such as raw material costs, regional supply and demand factors and exchange rate movements”. Thus, the Commission concluded that the market was no broader than EEA-wide<sup>20</sup>.
43. The notifying party agrees with this product market definition.

**B. Preliminary competitive assessment**

(1) Horizontal overlaps

*Water-based resins*

44. Arkema and Total's Resin Division overlap on the market for water-based resins. However, the notifying party submits that Arkema is only active in the US, while Total's Resin Division is mainly active in the EEA. Therefore, the notifying party considers that since the market is geographically defined as EEA-wide, there is no overlap on the market of water-based resins in the EEA.
45. In any event, the notifying party submits that the combined market share of Arkema and Total's Resin Division would remain below [0-5%] on a worldwide market and the main horizontal overlap at the worldwide level would be in the paints and coatings segment, located only in the US region with a combined market share remaining below [5-10%] on that segment.
46. Therefore, no affected markets result from the overlap of the activities of Arkema and Total's Resin Division in the water-based resin sector.

*Rheological additives*

47. Arkema and Total's Resin Division further overlap in the rheological additives sector. However, Arkema is only active on the market for rheological additives for water-based applications and Total's Resin Division is only active on the market of rheological additives for solvent-based applications, which are defined as two separate relevant

---

<sup>19</sup> Commission decision of 8 January 2009 in Case COMP/M.5424 – Dow / Rohm and Haas, paragraph 33.

<sup>20</sup> Commission decision of 8 January 2009 in Case COMP/M.5424 – Dow / Rohm and Haas, paragraph 38; Commission decision of 11 June 2003 in Case COMP/M. 3056 – Celanese / Degussa/ European Oxo Chemical, paragraph 38.

product markets. Therefore, the notifying party submits that they do not overlap in the EEA.

48. In any event, the notifying party submits that at the worldwide level, the combined market share of Arkema and Total's Resin Division would remain below [5-10%] also on a hypothetical overall market for rheological additives.

(2) Vertical links

*GAA/Resins*

49. There is a vertical link as Arkema produces GAA which is an input for the production of water-based, solvent-based and photocure resins by Total's Resin Division.

50. The notifying party submits that its market share on the GAA merchant market is [20-30%] in the EEA. Its biggest competitors are BASF and Dow with market shares of [50-60%] and [5-10%] respectively.

51. Total's Resin Division has a market share of [0-5%] on the market for water-based resins in the EEA. Other significant competitors in the EEA are Dow ([20-30%]), BASF ([10-20%]), Polymer Latex ([0-10%]) and Celanese ([0-10%]).

52. Total's Resin Division has a market share of [0-5%] on the market of solvent-based resins in the EEA. Other significant competitors in the EEA are Cytec ([10-20%]), DSM ([10-20%]) and Bayer ([0-10%]).

53. Total's Resin Division has a market share of [20-30%] on the market for photocure resins in the EEA. Other significant competitors in the EEA are Cytec ([30-40%]), BASF ([10-20%]) and IGM/Cognis ([0-10%]). The notifying party submits that producers of photocure resins possess significant spare capacities (around 20 kDMT<sup>21</sup> according to the notifying party's best estimates, and the utilization rate in the industry is of approximately 80%) and barriers to entry are not significantly high on the market of photocure resins.

54. Total's Resin Division has similar market shares even under a further segmentation according to the chemical composition or end-use application of the resins.

55. The notifying party submits that the transaction would not lead to any risk of customer foreclosure as (i) Total's Resin Division's total needs in GAA represent a small proportion of the overall merchant market ([...] in the EEA) and (ii) very few of Total's Resin Division's total needs in GAA remain available to be diverted to the benefit of Arkema after completion of the proposed transaction<sup>22</sup>.

56. Furthermore, the notifying party submits that the transaction would not lead to any risk of input foreclosure as (i) Arkema will continue to face strong competition on the upstream GAA market from players such as the market leader BASF and Dow, who possess some spare capacities on the market of GAA, where the utilization rate ranges

---

<sup>21</sup> Kilo Dry Metric Tons.

<sup>22</sup> Total's Resin Division already sources approximately [...] of its needs in GAA from Arkema.

from 81% to 88% and after completion of the proposed transaction, customers will continue to have access to readily available sources of GAA from well-renowned producers, (ii) customers do not incur any significant switching costs and (iii) Arkema predominantly depends (and will continue to depend after completion of the proposed transaction) on other customers besides Total's Resin Division to place its sales of GAA.

57. In view of the above, it is unlikely that the proposed transaction raises any competition concerns in relation to the supply of GAA or water-based, solvent-based or photocure resins.

*Acrylate Esters/Resins*

58. There is also a vertical link between Arkema's upstream production of BA, EA and 2-EHA and Total's Resin Division's downstream production of water-based and solvent-based resins.
59. Arkema had an EEA market share in BA, EA and 2-EHA of respectively [30-40]%, [30-40]% and [20-30]% in 2010.
60. Further major producers of BA in the EEA are BASF ([20-30]%), Dow ([10-20]%), Sasol ([10-20]%) and Acrylate ([0-10]%).
61. Further major producers of EA in the EEA are BASF ([10-20]%), Dow ([10-20]%), Sasol ([10-20]%) and Acrylate ([10-20]%).
62. The main competitors of Arkema in the EEA for 2-EHA are BASF ([40-50]%) and Dow ([0-10]%).
63. On the downstream markets for water-based and solvent-based resins in the EEA, Total's Resin Division had market shares of [0-5]% and [0-5]% respectively in 2010 and there are many other stronger market players.
64. The notifying party submits that the transaction would not lead to any risk of customer foreclosure as (i) Total's Resin Division is not a predominant buyer on the BA, EA and 2-EHA markets<sup>23</sup> and (ii) it already sources an important amount of its total needs in acrylate esters from Arkema<sup>24</sup>.
65. Furthermore, the notifying party submits that the transaction would not lead to any risk of input foreclosure as (i) Arkema is greatly dependent on other buyers (besides Total's Resin Division) to place its sales of acrylate esters<sup>25</sup>, (ii) considering the strong commercial relationships that already exist between Arkema and Total's Resin Division and the volumes that Total's Resin Division represents as a buyer with respect to acrylate esters, any vertical integration between the parties with respect to acrylate esters would

---

<sup>23</sup> Total's Resin Division's total needs represent only [...] to [...] of the total merchant market (whether at the EEA or worldwide level) depending on the acrylate ester considered.

<sup>24</sup> Total's Resin Division sources [...] to [...] of its total needs in acrylate esters (whether at the EEA or worldwide level) from Arkema depending on the acrylate ester considered.

<sup>25</sup> Arkema sells [...] to [...] of its production of acrylate esters (whether at the EEA or worldwide level) to other customers than Total's Resin Division depending on the acrylate ester considered.

not substantially modify or disrupt the current market conditions (notably the availability of these products) that prevail on this market and (iii) Arkema faces strong competition from other players on the markets for acrylate esters, many of whom are vertically integrated and who possess some spare capacity.

66. In view of the above, it is unlikely that the proposed transaction raises any competition concerns in relation to the supply of BA, EA or 2-EHA or water-based and solvent-based resins.

## **VI. CONCLUSION**

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

*For the Commission*

*(signed)*

*Joaquín ALMUNIA  
Vice-President*