
Completed acquisition by Dadco Alumina and Chemicals Limited of Aluminium Oxid Stade GmbH

The OFT's decision on reference under section 22 given on 29 October 2004

Please note square brackets indicate figure excised at Dadco's request or exact figure replaced by a range at Dadco's request.

PARTIES

1. **Dadco Alumina & Chemicals Limited (Dadco)** is a privately owned investment, manufacturing and trading group based in Guernsey. In 2003, Dadco's turnover was approximately [].
2. **Aluminium Oxid Stade GmbH (AOS)** is an alumina refinery in Stade near Hamburg in Germany. It produces metallurgical (or smelter grade) alumina and chemical grade alumina (including commodity alumina hydrate). Prior to the merger, AOS was 50 per cent owned by Dadco and 50 per cent owned by Hydro Aluminium Deutschland GmbH (HAD), a company in the Norsk Hydro Group. AOS did not make sales to third parties. Instead, it operated as a production joint venture, supplying product to Dadco and HAD, which together paid internal costs to AOS of around [] in 2002. AOS's UK turnover in the year to December 2003 was [].

TRANSACTION

3. On 30 June 2004, Dadco acquired HAD's interest in a German based alumina business consisting of a 50 per cent share in AOS (the other 50 per cent was already held by Dadco), HAD's related chemical grade alumina business and a 10 per cent share in Halco (Mining) Inc. As a result of the transaction, therefore, Dadco acquired sole control of AOS.

JURISDICTION

4. As a result of this transaction, Dadco and AOS/HAD's related chemical grade alumina business have ceased to be distinct. The parties overlap in the supply of smelter grade alumina and chemical grade alumina (including commodity alumina

hydrate). The share of supply test in section 23 of the Enterprise Act 2002 (the Act) is met in respect of the supply of commodity alumina hydrate in the United Kingdom (the UK). The OFT therefore believes that it is or may be the case that a relevant merger situation has been created.

RELEVANT MARKET

5. Prior to the merger, AOS supplied smelter grade alumina and chemical grade alumina (including commodity alumina hydrate) to Dadco and HAD only. These products are all derived from bauxite during a four stage refining process (involving digestion, clarification, precipitation and calcination) to make alumina.
 - (a) The bauxite is first ground and mixed with caustic soda and heated in high-pressure containers. During clarification, impurities and residues are separated out by melting and filtering processes and the liquid is pumped into exchangers and cooled. At the precipitation stage, the aluminium oxide is dissolved by the caustic soda and precipitated out of the liquid as crystals of alumina hydrate. The liquid is mixed with the precipitated crystals and solid alumina hydrate is formed as the liquid cools.
 - (b) At this stage, the resulting intermediate product can be removed in a wet, cake-like form and dried to make 'commodity alumina hydrate' (the proper name is aluminium hydroxide – $\text{Al}(\text{OH})_3$). When sold at this stage, it is used in industrial chemical applications. Commodity alumina hydrate can also be used as a feed stock to produce 'specialty hydrate', which requires additional manufacturing steps.
 - (c) However, the vast majority of the intermediate product is further processed by calcination (where water is eliminated from the crystals) into a white powder known as 'calcined alumina'. Most calcined alumina is transformed into aluminium metal in the smelting process, which is why calcined alumina is often called metallurgical (or smelter-grade) alumina. A small proportion of calcined aluminas are sold as alumina oxides.
6. A number of different terms are commonly used in the industry to refer to commodity alumina hydrate. It is also known as commodity hydrate; alumina trihydrate; ATH; or aluminium tri-hydroxide. As indicated above in paragraph 5(b), the term 'commodity alumina hydrate' is used in this decision to refer to the dried intermediate product extracted after the precipitation stage of production. The term 'chemical grade alumina' is used in this decision to describe any end alumina product that is not smelter-grade alumina: i.e., commodity alumina hydrate, specialty hydrate and alumina oxides.

Product market

7. As explained in more detail below, the focus of the OFT's investigation in this case has been on commodity alumina hydrate, which is the area of principal overlap between the parties' UK activities.
8. The European Commission (the Commission) considered the supply of commodity alumina hydrate in its assessment of the Alcoa/Reynolds merger.¹ The Commission concluded that, for both demand-side and supply-side reasons, there was a separate product market for commodity alumina hydrate used in the production of various industrial chemicals.
9. On the demand side, Dadco asserts that there are different types of commodity alumina hydrate corresponding to different particle sizes, morphology, whiteness, water content and impurities. Essentially however, the different types are all suitable for the same applications. There is no demand-side substitutability between commodity alumina hydrate and calcined alumina (i.e. smelter grade alumina). With the exception of one, all users contacted by the OFT confirmed that for technical reasons there are no substitutes for commodity alumina hydrate.
10. On the supply side, Dadco argues that it is very easy to divert production from smelter grade alumina to commodity alumina hydrate as smelter grade alumina is produced by calcining commodity alumina hydrate. Dadco suggests that to make the necessary changes to the refinery would cost less than \$10m and could be achieved within one year. Dadco cites one European alumina refinery as having switched production from smelter grade alumina to commodity alumina hydrate. However, the OFT was unable to confirm this and insufficient compelling evidence was available to us in the light of the Commission's Alcoa/Reynolds decision to conclude that producers of smelter grade alumina would not encounter technical difficulties and could easily, cheaply and quickly switch to producing commodity alumina hydrate in the event of a small but significant change in their relative prices.
11. On the basis of the above, a cautious view is taken that the appropriate product frame of reference for the assessment of the competitive effects of this merger is the supply of commodity alumina hydrate used as a raw material in the production of industrial chemicals.

¹ Case No. COMP/M.1693 of 03/05/2000. As a result of the Commission's decision in this case, Alcoa divested Reynold's 50 per cent share in AOS which was purchased by Dadco.

Geographic market

12. There are no UK manufacturers/suppliers of commodity alumina hydrate. Therefore, imports account for all supply in the UK. Dadco asserts that the supply of commodity alumina hydrate is worldwide. It states that transportation costs and logistics are not a barrier to supply from locations outside the EEA as evidenced by the fact that it supplies commodity alumina hydrate from Germany across the world. However, information provided by third parties indicates that almost all UK customers purchase their commodity alumina hydrate from EEA based suppliers. On this basis, and in the light of the Commission's Alcoa/Reynolds decision,² the OFT considers that the appropriate geographic frame of reference is the EEA.

HORIZONTAL ISSUES

13. Dadco submits that neither it nor HAD currently or in the recent past sold any smelter grade alumina in the UK and no concerns were raised in relation to smelter grade alumina during the OFT's investigation. On this basis, the OFT does not believe that it is or may be the case that the merger has resulted or may be expected to result in a substantial lessening of competition in the supply of smelter grade alumina in the UK.
14. In relation to overall sales of chemical grade alumina, Dadco states that its post merger share of supply in the UK last year was [less than 5] per cent. No concerns were raised to the OFT in relation to chemical grade alumina generally or, more specifically, in relation to specialty hydrates or alumina oxides. On this basis, the OFT does not believe that it is or may be the case that the merger has resulted or may be expected to result in a substantial lessening of competition in the supply of overall chemical grade alumina, specialty hydrates or alumina oxides in the UK. This decision does not therefore discuss chemical grade alumina, specialty hydrate or alumina oxides further.
15. Pre-merger, Dadco and HAD primarily overlapped in the supply in the UK of commodity alumina hydrate (a type of chemical grade alumina) that each acquired from AOS. The OFT's analysis of the competitive effect of this merger therefore considers whether it is or may be the case that the loss of competition between Dadco and HAD in the supply of commodity alumina hydrate has resulted or may be expected to result in a substantial lessening of competition in the UK.

² The Commission found that the geographic market definition for commodity alumina hydrate appeared not to be wider than EEA.

Market shares

16. Dadco was unable to estimate shares of supply/production of commodity alumina hydrate in the EEA. In the UK, Dadco estimates its combined share with HAD post merger at [20-30] per cent. One third party estimates Dadco and HAD's combined share of production (based on tonnage) of commodity alumina hydrate in the EEA at 51.5 per cent (increment 15.5 per cent). Another estimates it at 40 per cent (increment 13 per cent).
17. Such high shares of supply, if accurate, might provide an initial indicator of potential competition concerns. However, there is a question as to the strength of pre-existing competition between Dadco and HAD. Some UK customers state that they were not aware that Dadco supplied commodity alumina hydrate. This indicates that the share data might overstate the competitive position between Dadco and HAD in the UK.
18. In addition, Dadco states that there are a number of alternative suppliers in the EEA that currently supply commodity alumina hydrate. This has been confirmed by UK customers, which have identified a number of suppliers from which they can source their product. These include:
 - Alcoa, which has a refinery at St Ciprian, Spain, which, Dadco asserts, is the largest European supplier in terms of capacity;
 - Alcan, which has a refinery in Gardanne, France. Dadco states that both Alcoa and Alcan have plants outside the EEA from where they can feed their EEA based refineries. One UK customer confirmed that it switched from Dadco to Alcan to secure a more competitive price; and
 - MAL's alumina refinery in Hungary.
19. In addition, Glencore's Aughinish plant in Ireland confirmed that it also supplies commodity alumina hydrate in the EEA. Although Glencore does not currently supply customers in the UK from Aughinish, it would be able to do so without any constraints. One third party also stated that commodity alumina hydrate is available from the Eurallumina plant in south west Sardinia.³

³ Eurallumina is a joint venture between Comalco Limited, Glencore AG and Itallumina S.r.l. These participants take commodity alumina hydrate from the plant for worldwide sale.

Barriers to entry and expansion

20. Dadco submits that to start supplying commodity alumina hydrate, a new entrant requires a suitable site to build a refinery; planning permission; a source of bauxite (of which there is no shortage); the necessary production equipment; and marketing arrangements. The major cost is in the construction of the refinery. Dadco estimates that it would cost €500m to develop a plant of sufficient size to be economical.
21. As stated above, Dadco argues that existing smelter grade alumina producing refineries could divert their production facilities to make commodity alumina hydrate instead. In comparison with the cost of building a new hydrate plant, the cost of switching is much lower (less than \$10m). Storage facilities and perhaps drying equipment may be needed. Dadco suggests that some refineries may find it easier to change than others depending on the configuration of the plant and the source of their bauxite.
22. From the evidence obtained by the OFT, it appears unlikely that new entry in the supply of commodity alumina hydrate would occur within less than two years.⁴

Buyer power

23. The OFT has not received any evidence during its investigation to suggest that customers have any buyer power.

VERTICAL ISSUES

24. As stated above, producers of commodity alumina hydrate need a source of bauxite. Dadco has a long term agreement with Alcoa for the purchase of bauxite.⁵ As a result of this transaction, Dadco has acquired a 10 per cent interest in Halco (Mining) Inc, which is itself a participant in a Guinea bauxite mining joint venture. The acquisition of its interest in Halco ensures that Dadco's AOS plant has a secure supply of bauxite. It is common practice for commodity alumina hydrate manufacturers to own bauxite mining companies or to have a supply agreement in place to ensure a dedicated source. There does not appear to be a shortage of bauxite. Accordingly, the OFT does not consider that this transaction raises any vertical competition concerns.

⁴ The OFT's *Mergers – substantive assessment guidance* states that in order that new entry may be considered a sufficient competitive constraint, it must be sufficiently timely. Entry within less than two years will generally be timely, but this must be assessed on a case by case basis.

⁵ This agreement was put in place pursuant to the Commission's decision in Alcoa/Reynolds to enable the purchaser of the Reynolds' share in AOS to have a sufficient supply of bauxite.

THIRD PARTY VIEWS

25. The OFT approached a large number of customers and competitors during its investigation. Although responses were mixed, the majority of UK customers did not express any competition concerns as a result of the merger. They were either unaware that Dadco supplied commodity alumina hydrate or they considered there to be a sufficient number of alternative suppliers to meet their demands. Competitors were also unconcerned. Some customers in other EEA countries expressed concerns. In particular, the OFT received one unsolicited complaint alleging that as a result of the merger Dadco would be able to dictate the price of commodity alumina hydrate. However, the OFT found no evidence to support this allegation.

ASSESSMENT

26. Prior to the merger, Dadco and HAD separately sold to customers the commodity alumina hydrate that each acquired from AOS. Some third parties have estimated Dadco's post merger EEA share of supply to be as high as 51.5 per cent. However, the question at hand is whether the merger has resulted, or may be expected to result, in a lessening of competition that is substantial within any market or markets in the UK.
27. Dadco states that, for UK customers, its share is [20-30] per cent. If correct, this would indicate that prior to the merger Dadco and HAD were not as strong a constraint on each other in the UK as elsewhere in the EEA. This would accord with the majority of third party views expressed to the OFT where UK customers generally expressed no adverse opinion on the merger whilst some customers based outside the UK appeared concerned. In this respect the OFT must assess the impact of the merger on competition within the U.K. Whilst generally, where the OFT finds the competitive constraint to be EEA wide, views of customers based within the UK as well as abroad may be valid, it is also necessary to ascertain the closeness of the competitive constraint represented by the parties within the UK.
28. The evidence available to the OFT supports the view that HAD is less of a constraint in the UK than the EEA share data would suggest. Some UK customers were unaware that pre-merger Dadco supplied commodity alumina hydrate and the majority of UK customers consider that they have a choice of a number of existing commodity alumina hydrate suppliers (Dadco, Alcoa, Alcan, MAL). Customers could also turn to potential suppliers such as Glencore, which has indicated that it could supply commodity alumina hydrate into the UK with ease from its plant in Aughinish. Overall, the weight of the above evidence indicates

that there are no substantial competition concerns in the supply of commodity alumina hydrate.

29. Consequently, the OFT does not believe that it is or may be the case that the merger has resulted or may be expected to result in a substantial lessening of competition within a market or markets in the UK.

DECISION

30. This merger will therefore **not be referred** to the Competition Commission under section 22(1).