

Completed acquisition of Uniqema, a business division of Imperial Chemical Industries plc, by Croda International plc

The OFT's decision on reference under section 22(1) given on 10 November 2006. Full text of decision published 23 November 2006.

Please note that square brackets indicate figures or text which have been omitted or replaced with a range for reasons of commercial confidentiality.

PARTIES

1. **Croda International plc** (Croda) is a global chemicals company active in the production and supply of a wide range of chemicals for different industries.
2. **Uniqema** (Uniqema), a business division of global chemicals company Imperial Chemical Industries plc (ICI), is active in the production and supply of a range of chemicals for a wide variety of industries. Uniqema's turnover in the UK for the financial year ended 31 December 2005 was £[] million.

TRANSACTION

3. Croda has acquired, by means of a share and business purchase, Uniqema. The transaction was completed on 1 September 2006.
4. The transaction was notified to the OFT on 1 August 2006. The administrative deadline is 10 November.

JURISDICTION

5. As a result of this transaction, Croda and Uniqema have ceased to be distinct. The share of supply test in section 23(3) of the Enterprise

Act 2002 (the Act) is met as their combined share of the supply of fatty acids in the UK exceeds 25 per cent as a result of the merger. The OFT therefore believes that it is or may be the case that a relevant merger situation has been created.

RELEVANT MARKET

6. The parties overlap in the production and supply of the following main categories of platform chemicals¹:
 - Esters: chemicals produced from the reaction of an acid (usually a fatty acid) with a co-reactant to produce an ester and water.
 - Alkoxylates: chemicals produced from the reaction of a substrate (e.g. alcohols, esters or fatty acids) with (i) ethylene oxide to produce ethoxylates or (ii) propylene oxide to produce propoxylate.
 - Fatty Acids: chemicals derived from the hydrolysis of natural fats and oils. The largest volume of fatty acids is used to make derivatives such as alcohols, esters and alkoxylates.
 - Glycerine: a chemical most commonly produced through hydrolysis of oils and fats; as a by-product of the saponification of oils and fats with caustic soda; as a by-product of bio-diesel production or using petrochemicals.
 - Phosphate Esters: specific types of performance additives and also anionic surfactants, which are substances that reduce the surface tension of a solution.
 - Quaternaries (quats): other types of performance additives and also cationic surfactants.
7. The above platform chemicals can be used in many different applications, including detergency, emollients, emulsification, foaming, lubricating and wetting. They are used in a wide range of

¹ Platform chemicals are used by the industry to produce a wide range of derived chemicals and other materials.

industries including food, home care, personal care, plastics and textile care.

Product Scope

8. The parties maintain that the correct market segmentation in this case is one based on platform technology, primarily due to the ease of supply-side substitution between different types of esters, alkoxyates, glycerine and performance additives. In addition, the parties assert that it would be difficult for a firm to switch from producing one category of platform chemical to another.
9. This delineation has been supported by the vast majority of competitors and the International Chemicals Association (ICA) who confirmed to the OFT that segmentation by platform chemicals is the industry standard. All third parties who responded to our inquiries in this case agreed with the parties that it would be difficult for a firm to switch from producing one category of platform chemical to another. Another competitor noted that platform technology was the more appropriate market segmentation as this followed invested capital. Third party evidence also suggests that a factor of competition between firms appears to be their strength in producing certain platform chemicals.
10. As discussed above, the parties overlap in the production and supply of six platform chemicals: esters; alkoxyates; fatty acids; glycerine; phosphate esters and quats, each of which could be further sub-segmented into derived chemicals. For example, by function or co-reactant in the case of esters; by originating oil, degree of saturation, degree of concentration, refining process or carbon atom chain length in the case of fatty acids; or by origin or purity in the case of glycerine. However, the parties maintain that it would not be appropriate to further segment each the above categories into individual chemicals given the high degree of supply side substitution between the individual chemicals. The parties assert that the production of various types of derived chemicals within each of the above categories can be done using the same basic manufacturing equipment making supply side substitution relatively easy.

11. On the demand side, the parties state that customers are able to switch suppliers relatively easily, subject to testing costs. However, as this testing cost applies whenever a formulation change or switch in supplier occurs it is not an obstacle for a new supplier entering into the supply of an individual chemical. Furthermore, the parties note that most customers often have two or more approved suppliers at any one time to protect their supply chain and increase their ability to negotiate on price.
12. Several competitors who responded to our inquiries agreed that it is fairly straightforward to switch between producing different types of esters, alkoxylates, glycerine, phosphate esters and quats. However, the production of fatty acids requires further processing either through distillation, crystallisation, fractional distillation or hardening. Each of them requires a different production facility and therefore ultimately results in a higher cost and longer time frame for supply-side substitution.
13. Some customers agree that they can switch fairly easily following a price increase, but others state that demand-side substitutability between individual chemicals is limited due to testing requirements which may take up to one year to gain approval from the end customer. Competitors recognise that customers would require testing to get approval for any change in supplier. However, this testing would also be required if they changed the product specification or switched to a new supplier already producing the relevant chemical. Third party comments in this case suggest that testing costs are standard across the industry. Furthermore, third party comments support the parties' assertion that customers often have two or more approved suppliers making switching or the flexing of volumes easier.
14. The OFT concludes that there is no evidence to suggest that a market segmentation wider than by platform chemical would be appropriate in this case. Furthermore, a narrower market segmentation (except in the case of fatty acids) does not appear to adequately reflect the way in which firms in the industry compete given the high level of supply-side substitutability.

15. The OFT has also considered whether alternative market segmentations suggested by a few third parties may be appropriate in this case. Firstly, given that the platform chemicals listed above are not homogeneous products in terms of their application (e.g. alkoxyates can be used as a thickening agent or an emulsifier), a few competitors suggested that a market segmentation by application/performance feature would be appropriate. Furthermore, evidence was provided to us that suggests that some suppliers do segment their business in this way. On the demand side, there is evidence that many of the types of chemicals in which the parties overlap can be used for more than one application depending on the industry. However, evidence also indicates that customers usually know the exact chemical composition (formula) of each individual chemical they purchase. To limit testing costs they would therefore switch suppliers by asking another producer operating in the same platform chemical to produce specific volumes based on the same formula, rather than seeking a new product that performs the same application (i.e. acts as an emulsifier). Whilst on the demand side customers are undoubtedly interested in the performance features of the individual chemical they purchase this does not fully reflect the way in which firms compete. Although this may be a realistic market segmentation for business purposes, the OFT believes that it is not the most appropriate for the competitive analysis in this case.
16. Secondly, one competitor suggested that the market should be segmented by end use (home care, personal care, pharmaceuticals etc). However, this was not broadly supported by third parties and, in any case, evidence provided by the parties suggests that the parties' combined shares of supply would be de minimis based on such segmentation, regardless of geographic scope. The OFT, therefore, has not considered this further.
17. Thirdly, based on the approach taken by the European Commission in several merger cases², the OFT has also considered whether the market should be segmented by surfactant type (based on their ionic properties in water): anionic; non-ionic; cationic and amphoteric. Surfactants (surface active agents) are substances that reduce the

² COMP/M.4179 – Huntsman / Ciba TE Business, 2006; COMP/M.2231 – Huntsman International / Albright & Wilson Surfactants Europe, 2001; and COMP/M.1517 – Rhodia / Donau Chemie / Albright & Wilson, 1999.

surface tension of a solution. They are used in a variety of industries for their foaming regulation, wetting, emulsification, solubilisation and dispersion properties. Although this segmentation is largely accepted by the industry and the parties have not contested it, the OFT believes that it is not the most appropriate approach to assess the competitive effect of the merger in this particular case as it does not cover all the overlap products. Specifically, some esters and quaternaries as well as all fatty acids and glycerines are not surfactants and therefore would need to be considered separately³.

18. In the light of the above considerations and for purpose of this decision, the competitive assessment focuses on the parties' overlaps by type of platform chemical. Specifically, the production and supply of esters, alkoxyates, fatty acids (segmented by production process), glycerine, phosphate esters and quats comprise separate frames of reference in this case. However, it has not been necessary to conclude whether the above types of platform chemicals should be further segmented because our analysis of the effect of the merger on the production and supply of the individual chemicals of which concerns were raised, suggest that the merger does not give rise to substantiated competition concerns on any geographic scope.

Geographic Scope

19. The parties suggest that the most appropriate geographic scope for this particular case is at least Western Europe and they have provided shares of supply data on this basis. Evidence to support their proposition includes significant trade into and out of the UK from Europe, Asia and North America.
20. Most third parties maintain that competition is either conducted on an EEA or global basis. In support, they submit that although large global producers often have a distribution office in locations with significant demand, it is not necessary to have a production facility, or a distribution office, for example, in the UK to serve the UK

³ For completeness we note that the conclusions of the competitive assessment by platform chemical and surfactant type would be similar. Phosphate esters are anionic surfactants, quats are cationic surfactants and esters and alkoxyates are non-ionic surfactants.

market. We have no evidence that suggests that the market is narrower than Western Europe and some evidence that the market may be wider, if not global. In particular, around 20 per cent of UK fatty acid sales in 2005 were accounted for by imports from Asia and examples were provided of producers who supply different platform chemicals across Europe from their production facilities in Japan and Malaysia.

21. One customer suggested that the correct geographic frame of reference for fatty acids was the UK. However, this is inconsistent with Eurostat trade data and other third party comments and therefore the OFT does not consider the geographic frame of reference for fatty acids to be as narrow as the UK.
22. There is strong evidence that the appropriate geographic scope is at least Western Europe. However, for completeness, we have examined the effect of the merger in both the UK and Western Europe. It is unnecessary for the OFT to conclude on the precise geographic scope as competition concerns do not arise on either a UK or Western European basis in respect of any platform chemical or any individual chemical in respect of which concerns were raised.

COMPETITIVE ASSESSMENT

HORIZONTAL ISSUES

23. Table one below provides the parties' shares of supply by platform technology on a Western Europe and UK bases.

Table 1: Shares of supply by platform chemicals

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24. On a Western Europe basis, the merger will not lead to combined shares of supply greater than 15 per cent, and increments are never greater than [<5] per cent. Therefore competition concerns do not arise.
25. On a UK basis, the parties' combined shares in alkoxyates, phosphate esters and quaternaries are below 15 per cent, and

increments do not exceed five per cent. Therefore competition concerns do not arise in respect of the supply of these products in the UK.

26. However, the merger will lead to combined UK shares of supply greater than 15 per cent in esters ([15-20] per cent with an increment of [5-10] per cent); fatty acids ([35-40] per cent with an increment of [<5] per cent); and glycerine ([15-20] per cent with an increment of [5-10] per cent).

Esters

27. In esters, the merged entity will have combined share of supply of [15-20] per cent in the UK, with an increment of [5-10] per cent and [10-15] per cent in the Western Europe, with an increment of [<5] per cent.
28. There is evidence that the market for esters is fairly fragmented. Danisco and Cognis, the two largest Western European producers, have a combined share of supply of 33 per cent. An industry report provided by the parties states that there are 25 producers of esters in Western Europe. Competitors in Western Europe mentioned by third parties include Degussa, Lasse, Dubois and Karlshamns.
29. As discussed, the parties assert that it is relatively easy to switch between producing different types of esters and this is broadly supported by competitors. Furthermore several customers state that they would consider switching suppliers if the price of esters increased, subject to testing costs. Customers and competitors agreed with the parties' view that customers often have two or more approved suppliers to support their supply chain and enable them to negotiate more aggressively on price. The parties state that in the last five years customers have moved towards shorter contracts and 'spot' markets due to spare capacity elsewhere and competitive pricing. The parties also provided examples of customers switching suppliers, for example the loss of ester sales in [] and fatty acid amides in [].

Fatty Acids

30. In Western Europe, the parties stated that they have a combined share of supply of fatty acids of [10-15] per cent, with an increment of [<5] per cent. Within the UK they stated that their share of supply is [35-40] per cent with an increment of [<5] per cent. Generally, such small increments do not give rise to competition concerns since the structure of the market is not altered materially.
31. One customer contended that the parties had a combined share of supply of over 90 per cent in fatty acids in the UK. However, we note that this is inconsistent with Eurostat and APAG⁴ data on UK sales of fatty acids and competitors' own estimates of their UK turnover in fatty acids, which all broadly confirm the parties' share of supply estimates. Furthermore, we found no evidence to suggest the most appropriate geographical frame of reference is narrower than Western Europe.
32. Evidence available to us indicates that other fatty acid suppliers in the UK and Western Europe include Cognis, Oleon, Acid Chem, Palm Oleo, Proctor & Gamble and Akzo Nobel.
33. However, as discussed within the product scope section, different fatty acids require different refining processes, which require a specific plant, this suggests limited supply-side substitution. The majority of competitors agreed with this, although Oleon stated that a supplier could switch to producing a different type of fatty acid quite easily. Customers are clearly looking for certain performance criteria and therefore demand-side substitution may also be limited, we have taken a cautious approach and considered post-merger competitive constraints in respect of different types of fatty acids as well.
34. The parties overlap in the [] and in the supply of fractions, stearines and oleines.⁵ Cognis, Undessa, FACL, Caerlocher, Karlshamms and Caila & Parés all produce all three of these fatty acids within Europe. In addition, Cremer Oleo and Berg & Schmidt distribute all three

⁴ European Oleochemicals Industry Association.

⁵ [].

around Europe from bases in Germany on behalf of Asian suppliers. Oleon are also active in Europe in the production of stearines and oleines. As a result post-merger there would be at least eight remaining suppliers in Europe, several of which are large global players in the chemicals industry.

Glycerine

35. In the UK the parties' combined share of supply is [15-20] per cent (increment [5-10] per cent).⁶ Across Western Europe, the parties' have a combined share of supply of [10-15] per cent, with an increment of [<5] per cent. Evidence indicates that there are at least [15-20] oleochemical-based glycerine manufacturers in Europe including Cognis, P&G, Dow Chemicals and Undessa. Globally, Uniqema is the third largest producer with a share of supply of [10-15] per cent, just below P&G and Cognis. Croda is not in the top 10 global glycerine producers and has a market share of less than [<5] per cent.

BARRIERS TO ENTRY

36. The parties assert that barriers to entry are relatively low and that there has been considerable new entry and expansion in the industry in the last decade, particularly in the production and supply of fatty acids. In addition, there is evidence that imports from Asia are becoming increasingly important due to lower production costs and high demand. According to the parties the impact of Asian manufacturing capacity has been the over-supply of fatty acids on the European market.
37. Competitors also mentioned several recent new entrants into the market, including Sanyo (producing Alkoxylates) and several new fatty acid and ester producers, mainly in South East Asia. However, their comments were mixed in relation to barriers to entry. Competitors were in agreement that barriers to entry are relatively low for the production of fatty acids and glycerine, with estimates of entry taking approx one year and costing approx €100,000.

⁶ There is no evidence to suggest the UK is the appropriate geographic frame of reference for glycerine.

38. For esters, two competitors stated that barriers to entry were low, with one saying it would only take a new entrant about three months to set up production. However, two other competitors stated that barriers were very high due to the high capital investment required in production facilities and R&D. It seems that entry costs are higher, although third party comments disagree by how much, and evidence from the parties suggest that recent expansion in Asia may have led to some over-capacity, which may reduce incentives for new entrants. However, we consider it is not necessary to conclude on barriers to entry in relation to esters given the number of operators already active in this sector

BUYER POWER

39. The parties maintain that it is fairly easy for customers to switch suppliers of any of the overlap products, subject to testing and approval. In particular the parties state that many customers are large multinationals such as Proctor & Gamble and Boots, who are likely to have substantial buyer power. Furthermore, customers often have more than one approved supplier to protect their supply chain and enable them to negotiate more strongly on price. According to the parties, this suggests some degree of negotiating power.

40. A few customers maintain that they have some negotiating power with suppliers based on their ability to switch and that they did not expect this to change substantially post-merger. Most competitors said that customers could, and often do, switch volumes if prices increase, suggesting that most suppliers believe that customers have a degree of buyer power. However, a few customers and competitors stated that testing costs would prevent customers switching to a totally new supplier immediately.

41. In light of the evidence above, and given the commodity nature of the overlap chemicals, the prevalence of dual or even multi-sourcing and the large number of suppliers, it is reasonable to conclude that customers have a degree of buyer power across the majority of the overlap chemicals and that this will not reduce significantly post-merger.

VERTICAL ISSUES

42. No vertical concerns are raised by this merger.

THIRD PARTY COMMENTS

43. The majority of third parties were unconcerned about this merger.

44. A few third parties raised concerns that the merger would enable the parties to increase market power in relation to three specific types of esters, namely sorbitan esters, sorbitan mono-oleates and fatty acid amides as well as one type of alkoxyate, ethoxylated sorbitan esters (suggested by the third party as being in the same product market as sorbitan esters). Given the available evidence on the high degree of supply side substitution within different types of platform chemicals and the number of existing suppliers within the UK and Western Europe of each of these individual chemicals, these concerns appear to be exaggerated.

ASSESSMENT

45. This inquiry focused on the parties' overlaps in the supply of certain platform chemicals: esters, alkoxyates, fatty acids, glycerine, phosphate esters and quaternaries. There is strong evidence that the market for these is at least Western Europe and on that basis the parties combined shares of supply are less than 15 per cent for all the overlap platform chemicals.

46. Even if the geographic market were to be taken as the UK – which the OFT does not believe to be appropriate – at the highest the merged entity will have combined shares of supply in the UK of up to [15-20] per cent, [35-40] per cent and [15-20] per cent for esters, fatty acids and glycerine respectively. However, competition concerns do not arise in these segments given that the available evidence indicates that numerous suppliers remain, customers have some buyer power and barriers to entry are relatively low, at least for fatty acid and glycerine. Furthermore, third parties were generally unconcerned.

47. Consequently, the OFT does not believe that it is or may be the case that the creation of this merger situation may be expected to result in a substantial lessening of competition within a market or markets in the United Kingdom.

DECISION

48. This merger will therefore not be referred to the Competition Commission under section 22(1) of the Act.