

***Case No COMP/M.6218 -  
INEOS/  
TESSENDERLO  
GROUP S-PVC ASSETS***

Only the English text is available and authentic.

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

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Article 6(1)(b) NON-OPPOSITION  
Date: 26/07/2011

***In electronic form on the EUR-Lex website under  
document number 32011M6218***



EUROPEAN COMMISSION

Brussels, 26.7.2011  
C(2011) 5483 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 Where possible the information omitted has been replaced by ranges of figures or a general description.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.6218 - INEOS/ Tessenderlo Group S-PVC Assets  
Commission decision pursuant to Article 6(1)(b) of Council Regulation  
No 139/2004<sup>1</sup>**

1. On 20 June 2011, the European Commission received a notification of a proposed concentration pursuant to Article 4 of Council Regulation (EC) No 139/2004 by which the undertaking Kerling plc, operating under the trading name of INEOS ChlorVinyls, and part of the wider INEOS Group of companies ("INEOS", Switzerland) acquires within the meaning of Article 3(1)(b) of the Merger Regulation control of parts of Tessenderlo Chemie NV, operating under the trading name of the Tessenderlo Group ("Tessenderlo", Belgium) by way of purchase of its Suspension Polyvinyl Chloride ("S-PVC") related assets representing the entire S-PVC business of Tessenderlo<sup>2</sup>.
2. INEOS is referred to as "the notifying party", Tessenderlo as "the Target Business" and both commonly as the "parties".

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<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 C 187, 28.06.2011, p.27.

## **I. THE PARTIES**

3. INEOS is active in the manufacture of petrochemicals, specialty chemicals and oil products. Its subsidiary INEOS ChlorVinyls is one of the major chlor-alkali producers in Europe and an important supplier of PVC.
4. Tessenderlo is active in chemical industry, natural derivatives, plastics converting, gelatine, and agricultural solutions. The Target Business consists of Tessenderlo's entire S-PVC business.

## **II. THE OPERATION**

5. On 14 June 2011 INEOS ChlorVinyls and Tessenderlo Chemie NV signed a Share Purchase Agreement pursuant to which the former will acquire sole control over the Target Business by way of purchase of Tessenderlo's entire S-PVC business. Therefore, the proposed transaction constitutes a concentration within the meaning of Article 3(1)(b) of the Merger Regulation.

## **III. EU DIMENSION**

6. The undertakings concerned have a combined aggregate world-wide turnover of more than EUR 5 000 million [INEOS: EUR 28 421 million; Tessenderlo: EUR [...] million]<sup>3</sup>. Each of them has an EU-wide turnover in excess of EUR 250 million [INEOS: EUR [...] million; Tessenderlo: EUR [...] million], but they do not achieve more than two-thirds of their aggregate EU-wide turnover within one and the same Member State. Therefore, the notified operation has an EU dimension pursuant to Article 1(2) of the Merger Regulation.

## **IV. RELEVANT MARKETS AND COMPETITIVE ASSESSMENT**

### **4.1 Introduction**

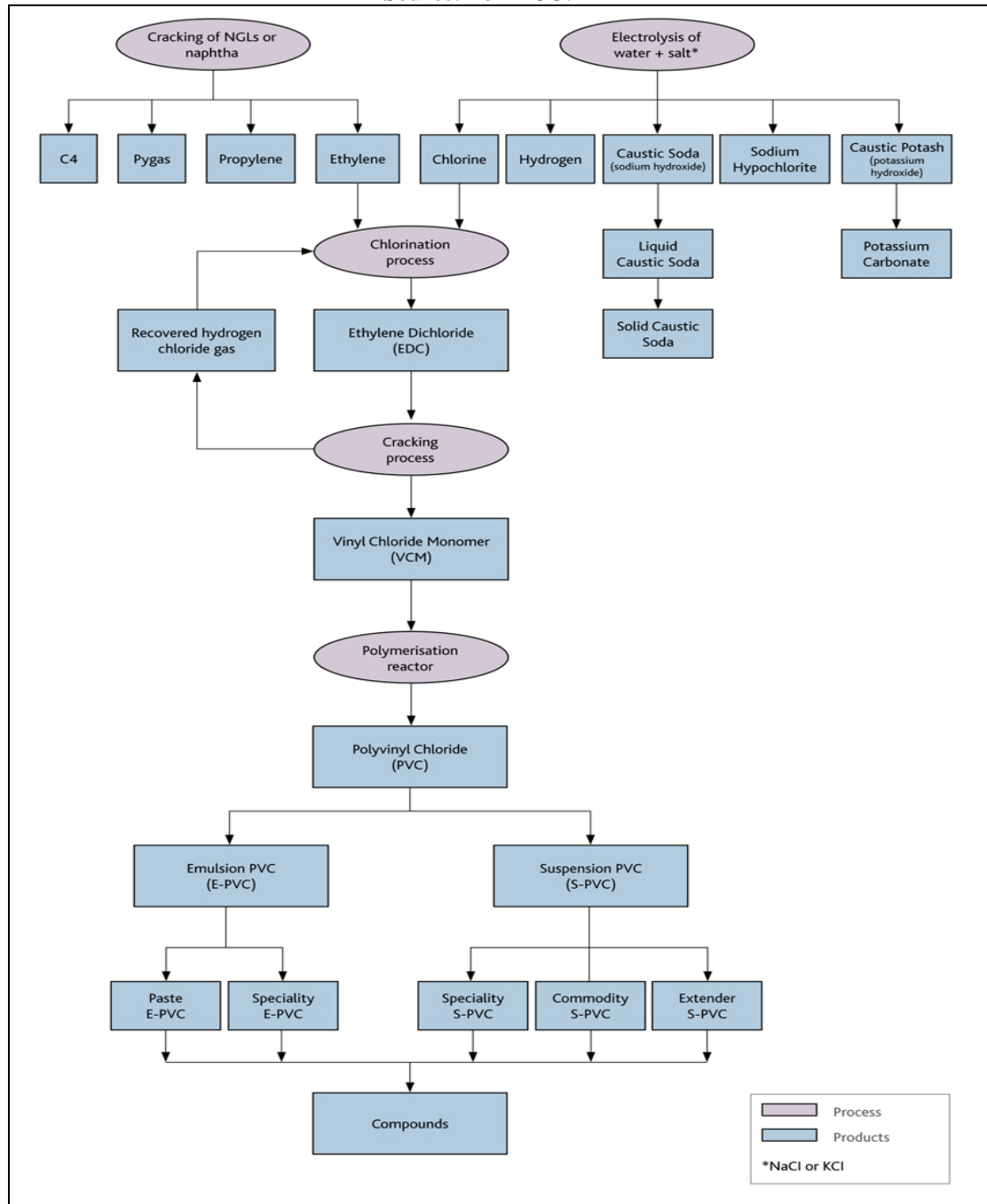
7. The transaction concerns the production of polyvinyl chloride ("PVC") and other products related to PVC production. Figure 1 illustrates the various processes and intermediate products involved in the production of PVC.
8. The production of PVC uses vinyl chloride monomer ("VCM") as a feedstock, which is produced from ethylene and chlorine. The process begins by the cracking of natural gas liquids ("NGLs") or naphtha in order to produce ethylene and other by-products. The ethylene is chlorinated in order to produce ethylene dichloride ("EDC") which, after a further cracking process, is transformed into VCM, which is in turn polymerised into PVC. The chlorine used in this process is produced through the electrolysis of salt and water which also results in the production of a by-product, caustic soda, which is sold by the parties on the merchant market.

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<sup>3</sup> Turnover calculated in accordance with Article 5(1) of the Merger Regulation and the Commission Consolidated Jurisdictional Notice (OJ C95, 16.04.2008, p1).

9. PVC is used in a wide range of applications, many of which are related to the construction industry. The largest applications for PVC are for pipes and moulded fittings, which represent 41% of total global demand, and profiles (i.e. window and door frames), which represent 15% of global demand. PVC is converted into end products through a variety of processes, including extrusion, continuous coating, blow moulding and injection.

**Figure 1: Overview of processes and intermediate products involved in the production of PVC**  
Source: Form CO.



10. Both parties are vertically integrated manufacturers of S-PVC. The proposed transaction involves a number of horizontally and vertically affected markets.
11. The horizontal overlaps result in affected markets in relation to S-PVC, liquid caustic soda, also known as caustic soda liquor ("CSL"), and Sodium Hypochlorite. The vertically affected markets relate to ethylene and VCM/EDC, which are directly upstream of S-PVC and compounded S-PVC, which is directly downstream of S-PVC.

## 4.2 Horizontal overlaps

### 4.2.1 Commodity suspension polyvinyl chloride (S-PVC)

#### Relevant product market

12. Depending on the production process, two types of PVC can be distinguished: suspension PVC ("S-PVC") and emulsion PVC ("E-PVC").
13. S-PVC is the most common type of PVC resin<sup>4</sup> and is used for both rigid (unplasticised) and flexible (plasticised) end-applications<sup>5</sup>. The production process consists of the suspension of VCM in water with an initiator. Following a polymerisation process and further processing, S-PVC is produced in the form of a coarse porous white powder.
14. The Emulsion PVC ("E-PVC") production process consists of the emulsion of VCM in water together with an initiator. E-PVC is also polymerised and further processed but, unlike S-PVC, takes the form of a very fine and smooth powder which can be sprayed rather than moulded or extruded. E-PVC is used in applications such as flooring, coated fabrics and automotive sealants.
15. In previous decisions the Commission found that E-PVC and S-PVC constitute separate markets<sup>6</sup>. In particular, from a demand-side perspective S-PVC and E-PVC are used for different applications, while from a supply-side perspective the equipment to produce these products is different and it is not economically feasible converting a S-PVC facility to produce E-PVC and *vice-versa*. Since the Target Business is not active in E-PVC, this product market is not discussed further in this decision.
16. In previous Commission decisions<sup>7</sup>, S-PVC was further segmented into three separate product markets: extender S-PVC, speciality S-PVC and commodity S-PVC. The market investigation in the present case has widely confirmed the view that these three products constitute separate product markets.<sup>8</sup> In the present case, the assessment concentrates on commodity S-PVC since the parties activities do not overlap as regard to specialty S-PVC or extender S-PVC<sup>9</sup>.
17. A further distinction of S-PVC can be envisaged according to its different grades, which relate to its molecular weight, commonly called K-value. However, the notifying party

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<sup>4</sup> Accounting for about 95% of the world's total production of PVC.

<sup>5</sup> Rigid end applications include pipes, window profiles and moulded fittings. Flexible end-applications include cable insulation and flexible tubes for crystal clear medical products.

<sup>6</sup> Case COMP/M.4734 *INEOS/Kerling* (2008), para. 19. Case COMP/M.4572 *Vinnolit/INEOS CV Speciality PVC Business* (2007) para 7-9.

<sup>7</sup> Case COMP/M.4734 *INEOS/Kerling* (2008), para. 20. Case COMP/M.4572 *Vinnolit/INEOS CV Speciality PVC Business* (2007), para. 7-9.

<sup>8</sup> Replies to question 8 of the Commission's questionnaire to competitors S-PVC and CSL dated 21 June 2011. Replies to question 5 of the Commission's questionnaire to customers S-PVC dated 21 June 2011.

<sup>9</sup> According to the notifying party, commodity S-PVC represents more than 90% of all S-PVC produced.

submits – following the decisional practice of the Commission<sup>10</sup> – that no further segmentation of the relevant product market for S-PVC according to grades is appropriate because the various K-grades can be produced using the same equipment and the same process and thus all manufacturers are able to produce a full range of grades of S-PVC. The parties further claim that customers perceive S-PVC as a fairly homogenous commodity product.

18. The results of the market investigation do not suggest that a further segmentation of the S-PVC market according to the K-value would be appropriate and are thus in line with the product market definition suggested by the parties and recently retained by the Commission after an in-depth investigation. While, from a demand side perspective, customers often indicated that they cannot switch between different commodity S-PVC grades as each grade has specific characteristics<sup>11</sup>, from a supply side perspective, suppliers confirmed that they are able to manufacture all different grades with their existing production equipment<sup>12</sup>. The market investigation established that, in case a supplier is not currently covering a specific K-value in its portfolio, it could easily adjust its production process to start offering this specific grade<sup>13</sup>.
19. In the light of the above, for the purpose of this decision, it can be concluded that the relevant product market is the market for commodity S-PVC.

### **Relevant geographic market**

20. The notifying party submits that the relevant geographic market for commodity S-PVC is EEA-wide. It argues that transport costs are not a significant barrier because S-PVC is a solid, stable, non-toxic commodity product that is normally shipped in sacks or tankers and is readily and safely transportable over considerable distances. In that regard, the notifying party refers to the Decision in *Ineos/Kerling*<sup>14</sup>, where following an in-depth investigation the Commission found that customers considered that they had competitive alternatives among suppliers located within a range of 1 000 to 1 500km.
21. In addition, the notifying party considers that the geographic scope of the market is also supported by trade figures. On average, EEA countries export at least [30-40]% of domestic PVC production to other EEA countries<sup>15</sup>. Moreover, a substantial part of national demand ([30-40]% on average) in most EEA countries is met by imports. These

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<sup>10</sup> Case COMP/M.4734 *INEOS/Kerling* (2008), para. 23.

<sup>11</sup> Replies to question 7 of the Commission's questionnaire to customers S-PVC dated 21 June 2011.

<sup>12</sup> Replies to question 9 of the Commission's questionnaire to competitors CSL and S-PVC dated 21 June 2011.

<sup>13</sup> Replies to question 13 of the Commission's questionnaire to customers S-PVC dated 21 June 2011.

<sup>14</sup> Case M.4734 *INEOS/Kerling* (2008), para. 61 and 68.

<sup>15</sup> Industry data analysed covers trade in all PVC, and not just commodity S-PVC. However, as the majority of PVC is constituted by commodity S-PVC, the data provides a reasonable proxy for the pattern of trade in commodity S-PVC.

trade figures are complemented by shipment data for each of INEOS' and the Target Business' plants.

22. Finally, the notifying party argues that there are also considerable overlaps between the shipment areas of the principal producers of PVC, creating a chain of substitution which ensures that customers face competitive conditions throughout the EEA.
23. In previous decisions<sup>16</sup>, the Commission left open the geographic market definition for commodity S-PVC. However, it stated that the geographic scope of the market was wider than national and was at least North Western Europe<sup>17</sup> while ultimately leaving open the question as to whether the market could be considered to cover Western Europe<sup>18</sup> or even the EEA.<sup>19</sup>
24. The market investigation broadly confirmed that the geographic scope of the market for commodity S-PVC is wider than national and could be of an EEA-wide dimension. In particular, the majority of customers signalled that the market would be at least North West Europe and might be EEA-wide<sup>20</sup> in scope, while competitors were equally divided in considering that the market would be at least Western Europe or even EEA-wide<sup>21</sup>. In addition, several customers indicated the possibility of spot market purchases from suppliers located in geographic areas other than the EEA.
25. Furthermore, the analysis of the parties and their competitors' shipment data compiled in the market investigation confirmed that the geographic scope of the market is wider than national and covers at least North West Europe. Shipment data gathered shows indeed significant trade of S-PVC occurring across Member States and within North West Europe<sup>22</sup>. In particular, based on the analysis conducted, shipments of commodity S-PVC cover on average a distance of around 500 km, but can go up to 2 000 km<sup>23</sup>. Transport costs are not a barrier to supply S-PVC across the EEA since they represent

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<sup>16</sup> Case M.4734 *INEOS/Kerling* (2008), para. 64 and 153.

<sup>17</sup> Belgium, Luxembourg, Netherlands, Denmark, France, Germany, Ireland, Sweden, Norway and the United Kingdom.

<sup>18</sup> North Western Europe plus Austria, Finland, Italy, Portugal, Spain and Switzerland.

<sup>19</sup> Case M.4734 *INEOS/Kerling* (2008), para. 57-58.

<sup>20</sup> Replies to question 11 of the Commission's questionnaire to customers S-PVC dated 21 June 2011. Only two customers, argued that the market is narrower than North West Europe, but their supply patterns indicated that they source from at least five suppliers spread across North West Europe. One was even able to source from the US.

<sup>21</sup> Replies to question 11 of the Commission's questionnaire to competitors CSL and S-PVC dated 21 June 2011.

<sup>22</sup> The data also shows that that there are also significant flows between North West Europe and other countries of Western Europe.

<sup>23</sup> Replies to question 10 of the Commission's questionnaire to competitors CSL and S-PVC dated 21 June 2011.

around 5% of the selling costs and even for longer distances are rarely above 10%<sup>24</sup>. On average, competitors export around 60% of their production to customers located outside the Member State where the plant is located.<sup>25</sup>

26. In view of the above, for the purpose of this decision, the relevant geographic market of Commodity S-PVC is considered to be at least North West Europe. The issue of whether the geographic scope of the market may be wider (namely covering Western Europe or the EEA) is ultimately left open since it will not change the competitive assessment of the case.

### **Competitive assessment**

27. As regards the market structure in S-PVC, under all the plausible alternative geographic market definitions shown in Table 1, the parties' combined market share would exceed [30-40]% only in case the relevant geographic market were to be defined as North West Europe. On such a market, INEOS and the Target Business would have a combined market share post-transaction of [30-40]% (INEOS [20-30]%, Target Business [10-20]%). The parties will continue to face competition from at least four sizable competitors such as Solvin ([10-20]%) Shin-Etsu ([10-20]%), Arkema ([10-20]%) and Vinnolit ([10-20]%), each of them holding higher market shares than the Target Business.<sup>26</sup>
28. Considering an alternative Western Europe or EEA-wide scenario, the parties' combined market share would decrease [...] to [30-40]% or [20-30]%. They will face competition from the same companies mentioned above: Solvin, Shin-Etsu, Arkema and Vinnolit.

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<sup>24</sup> Replies to question 10 and 13 of the Commission's questionnaire to competitors CSL and S-PVC dated 21 June 2011.

<sup>25</sup> Replies to question 10 of the Commission's questionnaire to competitors CSL and S-PVC dated 21 June 2011.

<sup>26</sup> Data gathered in the market investigation allowed to reconstruct the market shares for S-PVC for the main producers. The market shares provided in the Form CO do not differ significantly from those obtained from the market reconstruction.



**Table 1: Commodity S-PVC merchant market shares (by volume), 2010**  
Source: Form CO

	EEA		WE (**)		NWE (*)	
	Volume (kt)	Share (%)	Volume (kt)	Share (%)	Volume (kt)	Share (%)
INEOS	[...]	[20-30]%	[...]	[20-30]%	[...]	[20-30]%
Target Business	[...]	[5-10]%	[...]	[5-10]%	[...]	[10-20]%
<b>Combined</b>	[...]	<b>[20-30]%</b>	[...]	<b>[30-40]%</b>	[...]	<b>[30-40]%</b>
Solvin	[...]	[10-20]%	[...]	[10-20]%	[...]	[10-20]%
Shin-Etsu	[...]	[10-20]%	[...]	[10-20]%	[...]	[10-20]%
Arkema	[...]	[10-20]%	[...]	[10-20]%	[...]	[10-20]%
Vinnolit	[...]	[5-10]%	[...]	[5-10]%	[...]	[10-20]%
Anwil	[...]	[5-10]%	[...]	[0-5]%	[...]	[0-5]%
BorsodChem	[...]	[0-5]%	[...]	[0-5]%	[...]	[0-5]%
Aiscondel	[...]	[0-5]%	[...]	[0-5]%	[...]	[0-5]%
Vestolit	[...]	[0-5]%	[...]	[0-5]%	[...]	[0-5]%
Others	[...]	[5-10]%	[...]	[5-10]%	[...]	[0-5]%
<b>Total Market(***)</b>	[...]	<b>100%</b>	[...]	<b>100%</b>	[...]	<b>100%</b>

(\*) North West Europe (NWE) includes: Belgium, Luxembourg, Netherlands, Denmark, France, Ireland, Sweden, Norway and the United Kingdom.

(\*\*) Western Europe (WE) includes: NWE plus Austria, Finland, Italy, Portugal, Spain and Switzerland.

(\*\*\*) Data do not include extender/specialty S-PVC, which INEOS estimates only account for around [5-10]% of the total market for S-PVC (and to some extent are substitutable with commodity S-PVC). Data do also not include captive production. INEOS estimates that, in addition to INEOS and the Target Business, Arkema, Solvin and BorsodChem make captive sales of S-PVC to their downstream businesses (i.e. for compounding and other end uses). INEOS estimates that captive sales of S-PVC in 2010 by these producers (including INEOS and the Target Business) were around [...] kt.

29. Concerning the view of the market players on the possible impact on competition of the transaction, several customers, and to a lesser extent some competitors, raised some concerns.

30. In particular, regarding the latter<sup>27</sup>, while some competitors argued that no dominant producer will emerge as a result of the transaction and that competition is likely to remain intense, others referred specifically to the situation in North West Europe and the UK where both merging parties had a strong position pre merger. However, almost all

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<sup>27</sup> Replies to question 43 and 45 of the Commission's questionnaire to competitors CSL and S-PVC dated 21 June 2011.

competitors believed that that the proposed transaction will not lead to price increases in S-PVC<sup>28</sup>.

31. As for the customers contacted, numerous respondents expressed concerns about the proposed transaction, since they consider it is a further step in the consolidation of the market for S-PVC leading to a reduction of potential suppliers.<sup>29</sup> In particular, those customers that currently procure from INEOS and the Target Business indicated that now they have to look for alternative sources and that INEOS will become even stronger and a price increase could not be excluded.<sup>30</sup>
32. The Commission therefore has analysed in detail to what extent the parties are close competitors, whether spare capacity for S-PVC is available and to whether customers have already several suppliers or could switch to alternatives in case of a price increase by the merged entity.
33. The market investigation revealed that the parties are not considered each other closest competitors. While INEOS has PVC plants in the UK, Germany, Norway and Sweden, the Target Business has its sites in France and the Netherlands.<sup>31</sup> The Target Business, rather than to INEOS, is more exposed to Shin-Etsu, Vestolit, Solvin and Vinnolit, who have plants in closer proximity to each of the Target Business' plants. Customers' replies generally confirmed that they do not consider INEOS and the Target Business to be each other closest competitors.<sup>32</sup>
34. Moreover, the market for S-PVC has a number of characteristics that allow customers to promote competition. In this respect, the commodity nature of S-PVC enables customers to source from any supplier. In that regard, the market investigation has confirmed that multiple sourcing is common in this market as a mechanism for customers to ensure security of supply and to attain competitive purchasing conditions<sup>33</sup>. Furthermore, the examination revealed that customers switch regularly<sup>34</sup> and that supply contracts are generally non exclusive and of relative short duration<sup>35</sup>. The accreditation of a new

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<sup>28</sup> Replies to question 44 of the Commission's questionnaire to competitors CSL and S-PVC dated 21 June 2011.

<sup>29</sup> Replies to question 29 of the Commission's questionnaire to customers S-PVC dated 21 June 2011.

<sup>30</sup> Replies to question 30 of the Commission's questionnaire to customers S-PVC dated 21 June 2011.

<sup>31</sup> Replies to question 14 of the Commission's questionnaire to competitors CSL and S-PVC dated 21 June 2011.

<sup>32</sup> Replies to question 15 of the Commission's questionnaire to competitors CSL and S-PVC dated 21 June 2011.

<sup>33</sup> Replies to question 22 of the Commission's questionnaire to competitors CSL and S-PVC dated 21 June 2011.

<sup>34</sup> Replies to question 23 of the Commission's questionnaire to competitors CSL and S-PVC dated 21 June 2011.

<sup>35</sup> Replies to question 21 of the Commission's questionnaire to competitors CSL and S-PVC dated 21 June 2011. The Notifying Party estimates about 50% of EEA demand for S-PVC is not committed under fixed term contracts, but is instead competed for on a monthly basis largely on price. Even longer term

supplier takes on average about three months and the costs incurred are negligible.<sup>36</sup> In that regard, it shall also be observed that an examination of the situation of customers having expressed concerns during the market investigation reveals that most of these have at least four selected alternative suppliers.

35. The market investigation also examined the total production capacity and the spare capacity available in the commodity S-PVC market to analyse the likely reaction of competitors to a price increase by the merged entity post transaction. The notifying party estimates that about [20-30]% of EEA S-PVC production capacity is not utilised (the S-PVC spare capacity in Western Europe and North West Europe are respectively [10-20]% and [10-20]% of the total production capacity). According to the notifying party estimates, competitors account for [80-90]% of the spare capacity in the EEA (and [70-80]% of Western Europe and [70-80]% North West Europe spare capacity).
36. The market investigation has confirmed that significant spare capacity is currently available<sup>37</sup>. Indeed, based on the information gathered in the investigation, in 2010 available spare capacity appears to be approximately 20% of the production capacity. While spare capacity is particularly high in Southern Europe (Spain, Portugal and to a lesser extent France)<sup>38</sup> it is significant as well in North West Europe. Moreover, the market investigation has revealed that the situation with respect to installed capacity is not likely to change substantially in the next two to three years.<sup>39</sup>
37. In the light of the above mentioned factors, it is concluded that the proposed transaction does not raise serious doubts in relation to the market for commodity S-PVC.

## 4.2.2 Caustic soda

### Relevant product market

38. Caustic soda is a by-product derived from the production of chlorine and is generally produced from the electrolysis of salt. It exists in liquid and solid forms. Liquid caustic soda or caustic soda liquor ("CSL") has a wide range of applications in the chemical industry, pulp and paper industry, in water treatment, in the production of aluminium, in oil refining as well as in soaps, detergents and textiles. Solid caustic soda is produced from the liquid form through the use of special additional evaporating equipment. The

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contracts are typically only for one year – two or three year contracts are the longest contracts that customers generally commit to.

<sup>36</sup> Replies to question 28 of the Commission's questionnaire to competitors CSL and S-PVC dated 21 June 2011.

<sup>37</sup> Replies to question 16 of the Commission's questionnaire to competitors CSL and S-PVC dated 21 June 2011.

<sup>38</sup> Replies to question 10 of the Commission's questionnaire to competitors CSL and S-PVC dated 21 June 2011.

<sup>39</sup> Replies to questions 17 and 18 of the Commission's questionnaire to competitors CSL and S-PVC dated 21 June 2011.

parties estimate that [90-100]% of all caustic soda sales in the EEA are in the liquid form.

39. The notifying party submits that caustic and liquid soda form separate relevant product markets and that a further segmentation within each caustic and liquid soda according to different qualities, concentration levels or the use of different technologies (namely diaphragm, mercury and electrolysis) is not justified as almost all suppliers are able to provide all types of CSL or solid caustic soda.
40. In previous decisions<sup>40</sup>, the Commission suggested that liquid and solid caustic soda constitute two separate markets, while leaving the exact product market definition ultimately open. It concluded however that a further segmentation within CSL or solid caustic soda would not be appropriate because most producers can easily produce and offer different concentrations.
41. The market investigation in the present case confirmed the previous findings. Although some customers indicated that for their applications a particular concentration level or technology is required and cannot easily be substituted by others, the majority of respondents, in particular competitors, argued that, while a distinction between CSL and solid caustic soda is appropriate, within each category no further segmentation is required due mainly to the existing supply-side substitutability.<sup>41</sup>
42. Given that the parties are only active in CSL, it can be left open for the purpose of this decision whether liquid and solid caustic soda constitute a single market or two separate markets. The assessment is therefore done hereafter for the narrowest plausible market definition, i.e. CSL.

### **Relevant geographic market**

43. The notifying party submits that the market for caustic soda liquid is EEA-wide. It refers to previous Commission decisions, where, while leaving the exact geographic market definition open, it was indicated that the market is wider than national and most likely EEA-wide due to the significant level of imports and homogeneity of prices across countries<sup>42</sup>. In that respect, INEOS submits that CSL can be shipped easily as exemplified by the significant trade across the EEA, in particular by the Target Business which from its plant in Belgium ships the product to several Member States<sup>43</sup>.
44. The replies to the market investigation confirmed that the geographic scope for CSL is wider than national. Indeed, a majority of customers considered the market to be EEA-

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<sup>40</sup> Case COMP/M.2690 Solvay/Montedison-Ausimont, 9 April 2002 and Case COMP/M.4734 – INEOS/Kerling 30 January 2008.

<sup>41</sup> The vast majority of the competitors consider that there is no need to further segment caustic soda by end-use application since inter alia caustic soda is a pure commodity with no special grades and different concentrations of the product do not make a meaningful difference for the market.

<sup>42</sup> Case COMP/M. 3543 PKN Orlen/Unipetrol and Case M.4737 – INEOS/Kerling 30 January 2008.

<sup>43</sup> INEOS estimates that at least one third of all CSL sales cross at least one border in Europe. INEOS and the Target Business both export significant volumes of CSL to a range of other European countries. Similarly, all of the largest suppliers of CSL (such as Dow, Solvay, AkzoNobel, Arkema and Bayer) sell in several European countries.

wide, while other indicated a distinction into geographic clusters of Member States. Only a few respondents suggested national markets. As to competitors, some of them considered the geographic scope of the market as EEA-wide while other consider it to be limited to clusters of EEA countries.<sup>44</sup>

45. The Commission complemented these qualitative replies with an analysis of actual shipment data obtained from the parties and their competitors. This data confirmed that CLS is traded within the EEA and travels significant distances. CLS shipments on average cover a distance of around 500 km and even go up to 2 000 km. Respondents estimate transport cost to be around 10% of the selling costs. Moreover, on average [50-60]% of EEA sales are made in a different country from the production site. Finally, many competitors are clustered in Germany, France and the Netherlands and regularly export to the United Kingdom, Ireland and the Nordic countries<sup>45</sup>.
46. Based on the replies and in particular the analysis of the shipment patterns for CSL, it can be concluded that the relevant geographic market for CSL is at least North West Europe and might even be EEA-wide in scope<sup>46</sup>.

### **Competitive assessment**

47. On an EEA-wide market for CSL, the parties would achieve post-transaction a combined market share of [10-20]% with an increment of [0-5]%. Market shares are [20-30]% for a narrower relevant market comprising North West Europe. In such a market, Tessenderlo has a market share of [0-5]%, while INEOS supplies [10-20]% of the market.
48. The combined market share in both cases is well below 25%, the level under which, in the absence of other factors, the Commission normally presumes an absence of anti-competitive effects.<sup>47</sup> Moreover, several sizeable competitors like Solvay, AkzoNobel, Bayer or Dow are active in the market and are able to constrain the parties post-transaction – see Table 2 below.

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<sup>44</sup> Replies to questions 32 and 33 of the Commission's questionnaire to competitors CSL and S-PVC dated 21 June 2011.

<sup>45</sup> E.g: Competitor 1 (sales in UK, Ireland, Sweden and Denmark from Germany), Competitor 2 (sales in Sweden and Denmark from Germany), Competitor 3 (sales in UK and Denmark from Belgium), Competitor 4 (sales in UK from France), Competitor 5 (sales in Sweden and Norway from Poland) and, to a lesser extent, Competitor 6 (sales in UK from Germany).

<sup>46</sup> North West Europe (NWE) includes: Belgium, Luxembourg, Netherlands, Denmark, France, Ireland, Sweden, Norway and the United Kingdom.

<sup>47</sup> Horizontal Merger Guidelines (OJ 2004 C 31/5, 05.02.2004), para. 18.

**Table 2: CSL – Market Shares 2009 for the EEA and North West Europe**  
**Source: Form CO**

	EEA-Wide		NWE (*)	
	Volume (kt)	Share (%)	Volume (kt)	Share (%)
INEOS	[...]	[10-20]%	[...]	[10-20]%
Target Business	[...]	[0-5]%	[...]	[0-5]%
<b>Combined</b>	<b>[...]</b>	<b>[10-20]%</b>	<b>[...]</b>	<b>[20-30]%</b>
Solvay	[...]	[10-20]%	[...]	[10-20]%
AkzoNobel	[...]	[10-20]%	[...]	[10-20]%
Arkema	[...]	[5-10]%	[...]	[5-10]%
Bayer	[...]	[5-10]%	[...]	[5-10]%
Dow	[...]	[5-10]%	[...]	[5-10]%
Vinnolit	[...]	[5-10]%	[...]	[5-10]%
Anwil	[...]	[0-5]%	[...]	[0-5]%
Vestolit	[...]	[0-5]%	[...]	[0-5]%
Ercros	[...]	[0-5]%	[...]	[0-5]%
Borsodchem	[...]	[0-5]%	[...]	n.a.
Others	[...]	[10-20]%	[...]	[5-10]%
<b>Total Market</b>	<b>[...]</b>	<b>100.0%</b>	<b>[...]</b>	<b>100.0%</b>

(\*) North West Europe (NWE) includes: Germany, Belgium, Luxembourg, Netherlands, Denmark, France, Ireland, Sweden, Norway and the United Kingdom.

**49.** In addition, competitors indicated that sufficient spare capacity is available in the market allowing them to supply additional customers if required.<sup>48</sup> While some customers, in particular those sourcing from both INEOS and Tessenderlo, argued that post-transaction there would be less alternatives available, most customers confirmed that they have in addition to the parties other potential suppliers and are able to switch. Market respondents also indicated that the parties are not perceived as close competitors.

**50.** It can therefore be concluded that the proposed transaction will not result in any competition concerns for caustic liquid soda in North West Europe or the EEA.

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<sup>48</sup> The Commission analysed during its market investigation the spare capacity available for third parties. Based on the 2010 production data, the available third party spare capacity is roughly [10-20]% of production capacity ([...] kt compared to a market size according to the notifying parties of [...] kt). It seems to be particular significant in Southern and Eastern Europe, but reached also [10-20]% in Germany, Belgium or France.

### 4.2.3 Sodium hypochlorite

#### Relevant product and geographic market

51. The parties both produce sodium hypochlorite, a by-product of their chlorine production. It is created by a reaction between chlorine and caustic soda. Sodium hypochlorite is generally used as a disinfectant, a bleaching agent, or for water.
52. The notifying party, in line with a previous Commission decision<sup>49</sup> proposes that sodium hypochlorite constitutes a single product market on the basis that formulation, prices and delivery conditions do not differ according to its different applications and other disinfectants are significantly more expensive.
53. For the purposes of this decision, the proposed transaction is analysed on a market for sodium hypochlorite, pursuant to the Commission's past practice.
54. The notifying party submits that the exact geographic market definition for sodium hypochlorite can be left open in the present case, as the proposed transaction does not give rise to competition concerns on the basis of any alternative definition.
55. Sodium hypochlorite is typically transported over shorter distances (ca.300km) due to its limited stability, high water content and corrosiveness. This was recognised by the Commission in a precedent decision, but the exact scope of the geographic market was ultimately left open<sup>50</sup>.
56. Given the absence of competition concerns under any plausible market definition, the relevant geographic scope for sodium hypochlorite can be left open in the present case as well.

#### Competitive assessment

57. On the basis of an EEA-wide market, the proposed transaction will not give rise to an affected market – the combined entity is estimated to have a market share of less than [5-10]% post-transaction (INEOS [5-10]%, Target Business [0-5]%).
58. Only on the basis of national markets, there would be two technically affected markets: Germany (combined market share of [10-20]% with an increment of [0-5]%) and the Netherlands (combined market share of [20-30]% with an increment of [0-5]%<sup>51</sup>). In both Member States sizeable competitors are able to constrain the parties post-transaction, in particular AkzoNobel, BASF, Solvay or Vinnolit.
59. **In the light of the foregoing, the Commission concludes that the proposed transaction will not impede effective competition in the market for sodium hypochlorite in the EEA or any substantial part thereof.**

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<sup>49</sup> Case M.2690 *Solvay/Montedison-Ausimont* (2002), paras. 117-118.

<sup>50</sup> Case M.2690 *Solvay/Montedison-Ausimont* (2002), paras. 119-120.

<sup>51</sup> According to the notifying party the increment results from [...].

### 4.3 Vertical relationships

60. The proposed transaction also results in a series of vertically affected markets. In particular, ethylene and Vinyl chloride monomer (VCM) / Ethylene dichloride (EDC) are directly upstream of S-PVC, while compounded S-PVC is directly downstream of S-PVC<sup>52</sup>.

#### 4.3.1 Ethylene / S-PVC

61. Ethylene is produced by steam cracking of gases such as natural gas or refinery gases, including propane and butane. It is used as a raw material for ethylene derivatives such as polyethylene, PVC and ethylene oxide and ethylbenzene. As ethylene is a hazardous gas which is highly flammable, it is distributed either in a compressed form by pipeline (ARG+ pipeline network) or in liquid form via refrigerated ships to an import terminal.
62. The Commission has previously considered that ethylene constitutes a distinct product market because the same product specification is suitable for all derivative uses and ethylene cannot be replaced by another product in these applications.<sup>53</sup>
63. As to the geographic scope of the market for ethylene, the Commission, in previous decisions<sup>54</sup>, left open whether the geographic scope of the market is EEA-wide or defined according to the available pipeline network given the limited amount of ethylene which is imported via terminals. For the purpose of this decision, the exact geographic market definition can be left open, as, irrespective of the market definition retained, the competitive assessment of the proposed transaction does not change.
64. Only INEOS is present in ethylene (raw material for the production of S-PVC). The transaction could not result in input foreclosure since INEOS's merchant market share of ethylene is insignificant representing [0-5]% at an EEA-wide level and less than [0-5]% at the ARG+ pipeline). Moreover, the combined entity will not be an important customer of ethylene on the merchant market (less than [0-5]% of merchant market demand EEA-wide).

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<sup>52</sup> The transaction leads also to a vertical relation with regards to chlorine and hydrogen chloride gas. However, since there is no significant merchant market for hydrogen chloride gas and neither INEOS nor the Target Business make sales of hydrogen chloride gas to third parties, the transaction would not raise any vertical anticompetitive concerns. The transaction does not lead either to any competition concerns in relation to chlorine since all of the Target Business and most of INEOS production is kept for captive use.

<sup>53</sup> Case No M. 4401 Basell / Münchsmünster Cracker and associated assets; Case No COMP/M.2389 Shell/DEA; Case No COMP/M.2345 – Deutsche BP / Erdölchemie; Case No COMP/M.4094 – INEOS/BP Dormagen.

<sup>54</sup> Case No M.4734 – INEOS/Kerling. Case No M. 4401 Basell / Münchsmünster Cracker and associated assets. Case No COMP/M.4094 – INEOS/BP Dormagen.



### 4.3.2 Ethylene dichloride (EDC) / S-PVC

65. EDC is produced by reacting chlorine or hydrogen chloride gas with ethylene. It is an intermediate product - the vast majority of EDC is used to make VCM<sup>55</sup>, which is an input for S-PVC production.
66. In previous decisions<sup>56</sup> the Commission has not concluded on whether EDC constitutes a distinct product market, nor has it determined the relevant geographic market delineation. In the present case, the question of whether there exists a merchant market for EDC and whether this product constitutes a separate product market on its own right can be left open for the purposes of the assessment as no competition concerns arise under any plausible market delineation because all PVC producers, including both INEOS and the Target Business, use EDC mainly captively<sup>57</sup>. Moreover, all of the Target Business's EDC production is for captive use, while INEOS carried out some very minor<sup>58</sup> sales of EDC to third parties in the past.
67. The transaction could not lead to input foreclosure because INEOS makes hardly any sales of EDC to third parties and the Target Business does not make any sales of EDC. There will be no issue of customer foreclosure because the Target Business does not purchase EDC from third parties.

### 4.3.3 Vinyl chloride monomer (VCM) / S-PVC

68. VCM is the result of the further cracking of EDC. Almost all the VCM is used to produce PVC<sup>59</sup>. In this context, the demand for PVC drives the demand for VCM<sup>60</sup>.
69. In the present case, similar to a previous Commission decision<sup>61</sup>, the question of whether there exists a merchant market for VCM and whether this product constitutes a separate product market on its own right can be left open for the purposes of the assessment. It shall however be observed that all PVC producers, including both INEOS and the Target Business, use VCM mainly captively. Although the parties suggest that the geographic scope of the market is likely to be EEA-wide, it can also be left open as no competition concerns arise under any plausible market delineation.

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<sup>55</sup> In 2010, VCM represented approximately [90-100]% of the European demand of EDC. Other uses of EDC include chlorinated solvents and ethylene amines.

<sup>56</sup> In Case M.4734 INEOS/Kerling (2008), para. 29.

<sup>57</sup> Virtually all VCM and PVC producers in the EEA have sufficient EDC capacity to match their internal demand. EDC is rarely traded between producers in the EEA for the purposes of producing VCM or PVC.

<sup>58</sup> The sales or purchases of EDC are usually for purely logistical balance reasons or to address the unexpected shortfalls in capacity of other PVC producers (e.g. due to plant outages). In 2010, INEOS made limited sales of approximately [...] kt of EDC to third parties.

<sup>59</sup> In 2010, PVC represented approximately [90-100]% of the European demand of VCM.

<sup>60</sup> There are some other very small speciality chemical uses for VCM, but these are insignificant in comparison to PVC.

<sup>61</sup> M.4734 – INEOS/Kerling, para 30.

70. Both INEOS and the Target business made limited sales of VCM to third parties in the EEA<sup>62</sup>. However, the proposed transaction will not raise concerns of input foreclosure because the vast majority of INEOS's sales of VCM are under long-term structural contracts and the Target Business only makes insignificant sales of VCM to third parties. There will be no issues of customer foreclosure because the Target Business does not purchase VCM from third parties.

#### **4.3.4 S-PVC / S-PVC compounds**

71. S-PVC needs to be compounded (blended with other ingredients such as pigments and other materials in order to confer the desired characteristics to the final product) before it can be directly used in any end application. S-PVC manufacturers do not generally perform the compounding, customers do it themselves as part of their production process.

72. INEOS has compounding facilities and carries out some compounding of S-PVC to customer requirements<sup>63</sup>. Tessenderlo's compounding facilities are not included in the scope of the proposed transaction.

73. The Commission has previously considered that PVC compounds constitute a distinct product market separate from commodity S-PVC. It also considered, although ultimately leaving the issue open, whether the market may be further divided into two distinct product markets: dry blend and gelled compounds.<sup>64</sup>

74. With regards to the geographic scope of the market, the Commission concluded that the market was wider than national while leaving open the exact scope of the geographic market definition.

75. Irrespective of the market definition followed, post-transaction, the combined entity will not be in a position to curtail supplies of S-PVC to specialist compounders, as it will not enjoy market power on the S-PVC market. Moreover, INEOS had only a relatively small share in the market of S-PVC compounds under any alternative market definition, either at the EEA ([5-10]% market share), Western Europe ([5-10]% market share) or North West Europe ([10-20]% market share). Furthermore, as previously indicated, the Target Business does not carry out PVC compounding services. Therefore, the combined entity will not have the ability or the incentive to foreclose competitors or customers on the market for PVC compounds.

76. Furthermore the market investigation did not raise any specific concerns as to any vertical relation arising from the transaction.<sup>65</sup>

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<sup>62</sup> INEOS and Target Business VCM sales third parties amounted respectively to [...] kt ([5-10]% in the EEA) and [...] kt ([0-5]% in the EEA).

<sup>63</sup> According to the Notifying Party around [80-90]% of the S-PVC sold is compounded in-house by the purchaser of the S-PVC.

<sup>64</sup> Case M.4734 - INEOS/Kerling (2008), para. 41.

<sup>65</sup> Replies to questions 41 and 42 of the Commission's questionnaire to competitors CSL and S-PVC dated 21 June 2011.

77. On the basis of the above, it is concluded that the vertical relations resulting from the proposed transaction would not result in any competition concerns.

## **V. CONCLUSION**

78. 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)*  
*Maria DAMANAKI*  
*Member of the Commission*