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**Section 57 of the Competition Act (Cap. 50B)**

**Grounds of Decision issued by the Competition Commission of Singapore**

**In relation to the notification for decision of the proposed acquisition by Denki Kagaku Kogyo Kabushiki Kaisha and Mitsui & Co. Ltd. of the chloroprene rubber business of E.I. du Pont Nemours and Company pursuant to section 57 of the Competition Act**

**07 May 2015**

**Case number: CCS/400/002/15**

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Confidential information in the original version of this Decision has been redacted from the published version on the public register. Redacted confidential information in the text of the published version of the Decision is denoted by [X].

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## I. Introduction

### *The Notification*

1. On 25 March 2015, Denki Kagaku Kogyo Kabushiki Kaisha (“Denka”), Mitsui & Co., Ltd. (“Mitsui”) and E.I. du Pont de Nemours and Company (“DuPont”) (collectively referred to as the “Parties”) filed a joint notification pursuant to section 57 of the Competition Act (Cap. 50B) (the “Act”) for a decision by the Competition Commission of Singapore (“CCS”) as to whether the proposed acquisition by Denka Performance Elastomer LLC, a joint venture company set up by Denka and Mitsui, of the chloroprene rubber (“CR”) business of DuPont (the “Proposed Transaction”) will infringe the section 54 prohibition of the Act.
2. In reviewing the Proposed Transaction, CCS contacted two customers (or end-users)<sup>1</sup> and one distributor<sup>2</sup> in Singapore, and five global manufacturers<sup>3</sup> of CR. With the exception of two manufacturers, all third-parties contacted provided a response to CCS’s questionnaire.<sup>4</sup> None of the third-parties who responded raised concerns with the Proposed Transaction.<sup>5</sup>
3. At the end of the consultation process and after evaluating all the evidence, CCS concludes that the Proposed Transaction, if carried into effect, will not infringe section 54 of the Act.

## II. The Parties

### *Denka*

4. Denka is a public company limited by shares<sup>6</sup>, and is listed on the Tokyo Stock Exchange. Denka engages in, amongst other things, the manufacture and distribution of various chemical products, including styrene-based resins, acetylene-based organic chemicals (such as CR), fertilizers, inorganic chemicals, cement and cement additives, electronic materials, and pharmaceutical products.<sup>7</sup>
5. Denka supplies its CR into Singapore through Mitsui, its distributor, and by selling directly to customers through its subsidiary, Akros Trading

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<sup>1</sup> [REDACTED].

<sup>2</sup> [REDACTED].

<sup>3</sup> [REDACTED].

<sup>4</sup> [REDACTED] did not respond.

<sup>5</sup> [REDACTED] response dated 14 April 2015 to Question 30 of CCS’s Request for Further Information (“RFI”) dated 31 March 2015. [REDACTED] response dated 16 April 2015 to Question 30 of CCS’s RFI dated 31 March 2015. [REDACTED] response dated 14 April 2015 to Questions 15, 17 and 18 of CCS’s RFI dated 31 March 2015.

<sup>6</sup> Paragraph 8.1 of Form M1.

<sup>7</sup> Paragraph 10.7 of Form M1.

Singapore Private Limited (“Akros Singapore”) which distributes Denka’s CR and other products into Singapore.<sup>8</sup> Denka holds an effective share interest of 68.5% in Akros Singapore.<sup>9</sup>

6. Global group turnover for Denka was approximately S\$4.84 billion in the fiscal year ended 31 March 2014.<sup>10</sup> Group turnover for Denka in Singapore for the same period was approximately [REDACTED].<sup>11</sup>

#### *Mitsui*

7. Mitsui is a public company limited by shares<sup>12</sup> and is listed on the Tokyo Stock Exchange. Mitsui is a trading company that focuses on several business areas, such as metals, machinery & infrastructure, chemicals, energy, lifestyle and innovation & corporate development.<sup>13</sup>
8. Through its wholly-owned subsidiary, Mitsui & Co. (Asia Pacific) Pte. Ltd.<sup>14</sup>, Mitsui distributes CR manufactured by Denka to [REDACTED].<sup>15</sup>
9. Global group turnover for Mitsui was approximately S\$69.57 billion in the fiscal year ended 31 March 2014.<sup>16</sup> Group turnover for Mitsui in Singapore for the same period was approximately [REDACTED].<sup>17</sup>

#### *DuPont*

10. DuPont is a public company limited by shares<sup>18</sup>, and is listed on the New York Stock Exchange.<sup>19</sup> DuPont is a science, technology and engineering company which develops products, materials and services in a wide range of sectors, focusing on agriculture and nutrition, industrial biosciences and advanced materials.<sup>20</sup>
11. DuPont engages in, amongst other things, the development of products, materials and services in agriculture, electronics and communications, industrial biosciences, nutrition and health, performance chemicals, performance materials and safety and protection.<sup>21</sup> DuPont engages in the

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<sup>8</sup> Paragraph 5.1 of the Parties’ response dated 9 April 2015 to CCS’s RFI dated 1 April 2015.

<sup>9</sup> Annex B of Form M1 and Paragraph 9.1 of the Parties’ response dated 20 April 2015 to CCS’s RFI dated 13 April 2015.

<sup>10</sup> Paragraph 13.1 of Form M1.

<sup>11</sup> Paragraph 13.4 of Form M1.

<sup>12</sup> Paragraph 8.2 of Form M1.

<sup>13</sup> Paragraph 7.2 of Form M1.

<sup>14</sup> Paragraph 1.1 of the Parties’ response dated 9 April 2015 to CCS’s RFI dated 1 April 2015.

<sup>15</sup> Paragraph 5.2 of the Parties’ response dated 9 April 2015 to CCS’s RFI dated 1 April 2015.

<sup>16</sup> Paragraph 13.2 of Form M1.

<sup>17</sup> Paragraph 13.4 of Form M1.

<sup>18</sup> Paragraph 8.3 of Form M1.

<sup>19</sup> <https://www.nyse.com/quote/XNYS:DD/company>.

<sup>20</sup> Paragraph 7.3 of Form M1.

<sup>21</sup> Paragraph 10.9 of Form M1.

manufacture and distribution of CR worldwide<sup>22</sup> and sells CR globally under the brand name “Neoprene”.<sup>23</sup>

12. DuPont has four subsidiaries registered in Singapore.<sup>24</sup> However, none of these subsidiaries are involved in the manufacture, production or distribution of CR. DuPont supplies CR to its customers in Singapore through [REDACTED].<sup>25</sup>
13. Global group turnover for DuPont was approximately S\$76.94 billion in the calendar year ended 31 December 2013.<sup>26</sup> Group turnover for DuPont in Singapore for the same period was approximately [REDACTED].<sup>27</sup>

### III. The Proposed Transaction

#### *Nature of the Proposed Transaction*

14. Pursuant to an Investor’s Agreement executed on 8 December 2014, Denka and Mitsui incorporated a joint venture company called Denka Performance Elastomer LLC (“the JV”).<sup>28</sup> The JV is currently 70% owned by Denka and 30% owned by Mitsui.<sup>29</sup>
15. Through the Proposed Transaction, the JV will acquire the assets of DuPont’s Global Neoprene Business pursuant to an Asset Purchase and Sale Agreement (“APSA”) entered into on 9 December 2014.<sup>30</sup> The assets involved in the acquisition include, *inter alia*, manufacturing equipment in Pontchartrain, Louisiana, as well as intellectual property rights such as trademarks and patents associated with DuPont’s Neoprene business.<sup>31</sup>
16. The Parties submitted that the notification to CCS only relates to the acquisition of DuPont’s Global Neoprene Business, and does not include the formation of the joint venture between Denka and Mitsui.<sup>32</sup> The Parties have also submitted that should it be clear that the acquisition of DuPont’s Global Neoprene Business pursuant to the APSA will not take place, the JV will be subsequently dissolved.<sup>33</sup>

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<sup>22</sup> Paragraph 10.9 of Form M1.

<sup>23</sup> Paragraph 10.6 of Form M1.

<sup>24</sup> Paragraph 10.3 of Form M1.

<sup>25</sup> Paragraph 5.3 of the Parties’ response dated 9 April 2015 to CCS’s RFI dated 1 April 2015.

<sup>26</sup> Paragraph 13.3 of Form M1.

<sup>27</sup> Paragraph 13.6 of Form M1.

<sup>28</sup> Paragraph 11.9 of Form M1.

<sup>29</sup> Paragraph 11.4 of Form M1.

<sup>30</sup> Paragraph 11.1 of Form M1.

<sup>31</sup> Paragraph 11.5 of Form M1.

<sup>32</sup> Parties’ response dated 19 March 2015 to CCS’s email dated 17 March 2015.

<sup>33</sup> Paragraphs 11.1 and 38.1 of Form M1. Paragraph 1.1 of the Parties’ response dated 20 April 2015 to CCS’s RFI dated 13 April 2015.

17. The Parties expect completion of the Proposed Transaction to take place in [X]<sup>34</sup>, subject to the satisfaction of all conditions precedent to closing in the APSA, such as obtaining the merger-control clearances in applicable jurisdictions including, but not limited to, Singapore.<sup>35</sup>

*Merger under Section 54 of the Competition Act*

18. Based on the Parties' submissions that the entirety of the assets associated with DuPont's CR business will be transferred to Denka Performance Elastomer LLC pursuant to the APSA, and that Denka and Mitsui will continue to manage the CR business, CCS considers that the transaction constitutes a merger pursuant to section 54(2)(c) of the Act.

**IV. Industry Background**

*Chloroprene Rubber*

19. CR is a general-purpose synthetic rubber, developed by DuPont and commercialised in 1931. CR is generally supplied to customers in the manufacturing industry which use CR as an input in their production process for a particular product. CR is widely used for the production of adhesives, car parts (e.g. automotive belts, boots, and hoses), general industrial products (e.g. conveyor belts), and other miscellaneous products (e.g. wetsuits, gloves).<sup>36</sup>

*CR Supply Chain in Singapore*

20. There are around seven major CR manufacturers globally.<sup>37</sup> Currently, there are no manufacturers of CR located in Singapore; all supplies of CR in Singapore are imported. Customers of CR in Singapore either procure CR directly from manufacturers of CR, or through distributors.<sup>38</sup>
21. In relation to the Parties, Figure 1 provides a diagrammatic illustration of their respective CR supply chain relationships in Singapore.

Figure 1: CR supply chain relationships of the Parties in Singapore

[X]

22. Purchases of CR are typically conducted through individual purchase orders or spot purchases, without any long term agreements between end-

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<sup>34</sup> Paragraph 11.13 of Form M1.

<sup>35</sup> Paragraph 11.11 of Form M1.

<sup>36</sup> Paragraph 19.1 of Form M1.

<sup>37</sup> Paragraphs 24.5 to 24.10 of Form M1.

<sup>38</sup> Paragraph 19.19 of Form M1.

users of CR and manufacturers/distributors.<sup>39</sup> Furthermore, manufacturer-distributor relationships may not be limited to CR. For example, besides CR, [REDACTED].<sup>40</sup>

## V. Counterfactuals

23. As stated in paragraph 4.6 of the *CCS Guidelines on the Substantive Assessment of Mergers*, CCS will, in assessing mergers and applying the substantial lessening of competition (“SLC”) test, evaluate the prospects for competition in the future with and without the merger. The competitive situation without the merger is referred to as the “counterfactual”. The SLC test will be applied prospectively, that is, future competition will be assessed with and without the merger.
24. The Parties submitted that in the absence of the Proposed Transaction, the business operations of Denka and Mitsui will continue as before.<sup>41</sup> [REDACTED].<sup>42</sup> [REDACTED].<sup>43</sup> [REDACTED].<sup>44</sup> [REDACTED].<sup>45</sup>

### *CCS’s Conclusion on the Relevant Counterfactual*

25. In considering what the appropriate counterfactual scenario should be, CCS has taken into account the Parties’ submissions in paragraph 24 above. Further, CCS has taken into account the Parties’ submission that the existence of the JV between Denka and Mitsui is closely tied to the notified merger (i.e. the acquisition of DuPont’s Global Neoprene Business by the JV).<sup>46</sup>
26. Accordingly, CCS considers that the relevant counterfactual scenario for the purposes of CCS’s competition assessment of the Proposed Transaction is a scenario in which (i) Denka and DuPont will continue to be competitors in the supply of CR into Singapore [REDACTED]; and (ii) the JV between Denka and Mitsui does not exist.

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<sup>39</sup> [REDACTED] response dated 16 April 2015 to Question 4 of CCS’s RFI dated 31 March 2015. [REDACTED] response dated 14 April 2015 to Question 4 of CCS’s RFI dated 31 March 2015.

<sup>40</sup> Paragraph 13.3 of the Parties’ response dated 9 April 2015 to CCS’s RFI dated 1 April 2015. [REDACTED] response dated 16 April 2015 to Question 2 of CCS’s RFI dated 15 April 2015.

<sup>41</sup> Paragraph 23.1 of Form M1.

<sup>42</sup> Paragraph 23.2 of Form M1.

<sup>43</sup> Paragraph 12.1 of Form M1.

<sup>44</sup> Paragraph 4.1 of the Parties’ response dated 20 April 2015 to CCS’s RFI dated 13 April 2015. Denka Board of Directors’ Meeting Materials, dated 18 December 2014, Annex 1 of Parties’ response to CCS’s RFI, received on 9 April 2015. DuPont’s CEO office documents authorising the sale of its CR assets, dated 1 December 2014, Annex 4 of Response from Parties to CCS’s RFI, received on 9 April 2015. [REDACTED].

<sup>45</sup> Paragraph 4.1 of the Parties’ response dated 20 April 2015 to CCS’s RFI dated 13 April 2015.

<sup>46</sup> Paragraph 11.11 of Form M1.

## VI. Competition Issues

27. For the purpose of this Proposed Transaction, the Parties submitted that they overlap in the supply of CR worldwide, including Singapore.<sup>47</sup>
28. Despite the overlap, the Parties submitted that the Proposed Transaction would not give rise to any competition concerns, because the CR industry is characterised by excess CR capacity, the ability for customers to switch between CR suppliers, the availability of cheaper CR substitutes and increasing competition from CR manufacturers located in China that offer CR at lower prices.<sup>48</sup>
29. In evaluating the potential impact of the Proposed Transaction, CCS has considered whether the Proposed Transaction will lead to coordinated and non-coordinated effects that would substantially lessen competition within any market in Singapore.
30. Further, it is noteworthy that even though the notified merger is limited to the Proposed Transaction i.e. the *proposed acquisition* of DuPont's Global Neoprene Business by the existing JV between Denka and Mitsui (and not the formation of the JV itself), the relevant counterfactual scenario for the purposes of CCS's competition assessment of the Proposed Transaction is a scenario in which the JV does not exist (as explained in the 'Counterfactual' section above). As such, in evaluating the potential impact of the Proposed Transaction, CCS has also considered the impact (if any) of the JV's existence on any market in Singapore, particularly on the relevant market.

## VII. Relevant Market

### (a) Product Market

#### *Parties' Submissions*

31. The Parties submitted that the narrowest relevant product market definition in relation to the overlapping product is the market for the supply of CR.<sup>49</sup>
32. According to the Parties, CR is categorised into three types according to its crystallisation rate (each of which is further divided into several grades):
  - i. Type A: CR grades with fast crystallisation speed, which are mainly used for adhesives and other industrial applications;

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<sup>47</sup> Paragraphs 15.1, 20.6 and 20.7 of Form M1.

<sup>48</sup> Paragraph 24.11 of Form M1.

<sup>49</sup> Paragraph 20.1 of Form M1.



- ii. Type M: CR grades with middle crystallisation speed, which are mainly used for automotive parts, conveyor belts and adhesives; and
  - iii. Type P: CR grades with sulphur, which are mainly used for transmission belts and wetsuits.<sup>50</sup>
33. The Parties submitted that, from a supply-side perspective, CR can be manufactured through two methods, namely the butadiene method and the acetylene method. Most CR manufacturers, including DuPont, use the butadiene method. Denka, on the other hand, uses the acetylene method.<sup>51</sup> The CR produced by either method is the same product and can be used interchangeably for CR applications.<sup>52</sup> The Parties added that all CR manufacturers are generally capable of manufacturing all grades of CR, and can fairly easily and quickly switch between CR grades they currently make.<sup>53</sup>
34. The Parties also submitted that, from a demand-side perspective, customers consider other polymers with equivalent product properties to be viable substitutes for CR; and there has been considerable substitution away from CR to these substitute products over the years.<sup>54</sup> The substitute products for nearly all applications of CR are listed in Annex A.<sup>55</sup>
35. The Parties further submitted that these products are considered by various customers as substitutes due to a myriad of factors. It was noted that some of these products, such as NBR<sup>56</sup> and EPDM<sup>57</sup>, are cheaper than CR, and are considered cheaper alternative source materials for applications such as adhesives, automotive belts and automotive boots.<sup>58</sup> Other products are considered as substitutes on the basis of their superior product characteristics as compared to CR. For instance, the Parties submitted that manufacturers of automotive boots are switching to TPE<sup>59</sup> as it is much lighter than CR (enabling better mileage), recyclable, and as compared to CR, has higher rigidity, higher tearing strength, lower temperature capability and better ozone resistance.<sup>60</sup>

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<sup>50</sup> Paragraph 36 of the Parties' response dated 9 April 2015 to CCS's RFI dated 1 April 2015.

<sup>51</sup> Paragraph 19.1 of the Parties' response dated 9 April 2015 to CCS's RFI dated 1 April 2015.

<sup>52</sup> Paragraph 20.3 of Form M1.

<sup>53</sup> Paragraph 33.1 of Form M1. Paragraph 36 of the Parties' response dated 9 April 2015 to CCS's RFI dated 1 April 2015.

<sup>54</sup> Paragraph 20.5 of Form M1.

<sup>55</sup> Paragraph 19.5 of Form M1.

<sup>56</sup> "NBR" is nitrile butadiene rubber.

<sup>57</sup> "EPDM" is ethylene-propylene diene monomer.

<sup>58</sup> Paragraph 19.5 of Form M1. Paragraph 17 of the Parties' response dated 9 April 2015 to CCS's RFI dated 1 April 2015.

<sup>59</sup> "TPE" is thermoplastic elastomer.

<sup>60</sup> Paragraph 19.8 of Form M1.

## *CCS's Assessment*

36. For the purposes of defining the relevant market, CCS notes that the focal product is CR. From customers' feedback, CCS notes that switching between different grades of CR is dependent on the compatibility of products and may be subjected to an internal qualification process.<sup>61</sup> Hence, it appears that switching between different grades of CR may be limited. However, CCS finds that it is unnecessary to further segment the CR product by its different grades as it appears that CR manufacturers are generally able to produce all grades of CR, and there is a high degree of supply-side substitution among the different grades of CR.<sup>62</sup>
37. In considering whether other polymers with equivalent product properties (as listed in Annex A) should be included in the relevant market, CCS notes from third-party feedback that CR's substitutability with other polymers with equivalent product properties is limited.<sup>63</sup> Further, [X] added that the relevant market should only consist of CR, as CR has its own specific applications.<sup>64</sup>
38. With regard to supply-side substitution, third-party feedback indicated that it would not be easy for suppliers of the other polymers with equivalent product properties to switch to producing CR as the production of CR requires the production of the Chloroprene monomer on the same site as polymerisation (given that Chloroprene is a very reactive material and could easily polymerise during transportation).<sup>65</sup>
39. CCS considers that, in view of the varied applications of CR, substitutability of CR with other polymers that have equivalent product properties (if any) would be application-specific.
40. In any event, CCS finds that it is unnecessary to determine whether other polymers with equivalent product properties (as listed in Annex A) should be included in the relevant market as CCS is of the view that the Proposed Transaction is unlikely to lead to a substantial lessening of competition even when the narrower market definition is used for assessing the Proposed Transaction.

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<sup>61</sup> [X] response dated 14 April 2015 to Question 22 of CCS's RFI dated 31 March 2015; and [X] response dated 16 April 2015 to Question 22 of CCS's RFI dated 31 March 2015.

<sup>62</sup> [X] Global and China Chloroprene Rubber Industry 2013 Market Research Report provided in Annex 5 of the Parties' response dated 9 April 2015 to CCS's RFI dated 1 April 2015.

<sup>63</sup> See for example, [X] response dated 17 April 2015 to Question 7 of CCS's RFI dated 15 April 2015; and [X] response dated 16 April 2015 to Question 18 of CCS's RFI dated 31 March 2015.

<sup>64</sup> [X] response dated 14 April 2015 to Question 23 of CCS's RFI dated 7 April 2015.

<sup>65</sup> [X] response dated 14 April 2015 to Question 24 of CCS's RFI dated 31 March 2015 and [X] response dated 20 April 2015 to Question 2 of CCS's RFI dated 15 April 2015.

41. Accordingly, CCS considers that the relevant product market for the competition assessment of the Proposed Transaction is the supply of CR.

## **(b) Geographic Market**

### *Parties' Submissions*

42. The Parties submitted that the relevant geographic market definition for the supply of CR is global, in view of global players who supply CR into Singapore. The Parties noted that there are various advantages for customers and suppliers to be geographically close to one another, such as lower transportation costs, shorter delivery times and reduced risks of product deterioration. However, the Parties are of the view that these factors do not limit international sales and highlighted that while it is cheaper for Denka to transport to a customer in Japan, the cost of transporting CR to a customer in the United States would only be approximately [§<] % more.<sup>66</sup>

### *CCS's Assessment*

43. CCS notes that currently all CR suppliers to Singapore are located outside of Singapore. Further, third-party feedback indicates that customers in Singapore source for CR globally, with some companies engaging their CR supplier on a global scale.<sup>67</sup> Differing transport costs depending on the location of the manufacturer of CR was not raised by third-parties as a key consideration when assessing which supplier to purchase from. Hence, CCS is of the view that the relevant geographic market for the competition assessment of the Proposed Transaction relates to the global supply to Singapore.
44. Accordingly, CCS considers the relevant market to be the global supply of CR into Singapore.

## **VIII. Market Structure**

### **(a) Market Shares and Market Concentration**

#### *Global Market Size and Market Shares (Volume)*

45. The Parties submitted that the total market size for the global market for CR in 2013 is approximately [§<] metric tons ("MT")<sup>68</sup> by volume based

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<sup>66</sup> Paragraph 20.7 of Form M1.

<sup>67</sup> See for example, [§<] response dated 16 April 2015 to Question 1 of CCS's RFI dated 31 March 2015.

<sup>68</sup> 1 metric ton ("MT") is equal to 1,000 kilograms or 1 tonne.

on the Parties' sales data and estimates based on export customs statistics.<sup>69</sup>

46. The Parties submitted that DuPont and Denka's shares of the global market for CR in 2013 were [10-20]% and [20-30]% respectively.<sup>70</sup> The global market share estimates by volume of CR are in Table 1 below.

Table 1: Estimated market shares for the global supply of CR from 2011 to 2013<sup>71</sup>

Supplier Name	2011		2012		2013	
	Volume (MT)	Shares by volume	Volume (MT)	Shares by volume	Volume (MT)	Shares by volume
DuPont	[X]	[10-20]%	[X]	[10-20]%	[X]	[10-20]%
Denka	[X]	[20-30]%	[X]	[20-30]%	[X]	[20-30]%
Lanxess	[X]	[20-30]%	[X]	[20-30]%	[X]	[20-30]%
Tosoh Corporation	[X]	[10-20]%	[X]	[10-20]%	[X]	[10-20]%
Showa Denko	[X]	[0-10]%	[X]	[0-10]%	[X]	[0-10]%
Shanna Synthetic Rubber Group	[X]	[0-10]%	[X]	[0-10]%	[X]	[0-10]%
Chongqing Changshou Chemical	[X]	[0-10]%	[X]	[0-10]%	[X]	[0-10]%
<b>Total</b>	[X]	<b>100%</b>	[X]	<b>100%</b>	[X]	<b>100%</b>

*Market Share Estimates for the Global Supply of CR into Singapore*

47. As concluded in paragraph 44, the relevant market is the global supply of CR into Singapore. In this regard the Parties submitted that DuPont and Denka's shares of the global supply of CR into Singapore in 2013 were [20-30]% and [60-70]% respectively<sup>72</sup>, and that their revenues from the sale of CR in Singapore amounted to less than [X] in 2013.<sup>73</sup> The Singapore market share estimates by volume of CR are in Table 2 below.

<sup>69</sup> Paragraph 21.1 of Form M1.

<sup>70</sup> Paragraph 21.2 of Form M1.

<sup>71</sup> Paragraphs 21.1, 21.2 and 21.3 of Form M1. Source: Parties' sales data and estimates based on export customs statistics.

<sup>72</sup> Paragraph 22.2 of Form M1.

<sup>73</sup> Paragraph 2 of the Parties' response dated 9 April 2015 to CCS's RFI dated 1 April 2015.

Table 2: Estimated market shares for the global supply of CR into Singapore from 2011 to 2013<sup>74</sup>

Supplier Name	2011		2012		2013	
	Volume (MT)	Shares by volume	Volume (MT)	Shares by volume	Volume (MT)	Shares by volume
DuPont	[X]	[30-40]%	[X]	[20-30]%	[X]	[20-30]%
Denka	[X]	[60-70]%	[X]	[70-80]%	[X]	[60-70]%
Lanxess <sup>75</sup>	[X]	[0-10]%	[X]	[0-10]%	[X]	[0-10]%
Tosoh Corporation	[X]	[0-10]%	[X]	[0-10]%	[X]	[0-10]%
Showa Denko	[X]	[0-10]%	[X]	[0-10]%	[X]	[0-10]%
Shanna Synthetic Rubber Group and Chongqing Changshou Chemical <sup>76</sup>	[X]	[0-10]%	[X]	[0-10]%	[X]	[0-10]%
<b>Total</b>	[X]	<b>100%</b>	[X]	<b>100%</b>	[X]	<b>100%</b>

48. The Parties highlighted that the CR volumes sold in Singapore as a proportion of global supply are small. In 2013, out of a total global CR volume of [X] MT, the volume of CR sold in Singapore was only [X] MT, accounting for [0-1]% of global supply. This demonstrates that for all global CR producers, sales of CR in Singapore [X].<sup>77</sup>
49. The Parties submitted that the entirety of CR consumed in Singapore is imported. There are no domestic manufacturers of CR in Singapore. The Parties also submitted that currently all of the seven significant CR manufacturers supplying CR on a global scale (as listed in Table 1) are equally well positioned to compete and sell CR in Singapore. Currently, the CR manufacturers supplying CR into Singapore are Denka, DuPont, Shanna Synthetic Rubber Group Co., Ltd. and Chongqing Changshou Chemical Co., Ltd.<sup>78</sup> However, the small number of suppliers is not the

<sup>74</sup> Paragraphs 22.1 and 22.2 of Form M1. Source: Parties' sales data and estimates based on export customs statistics.

<sup>75</sup> [X]. [X].

<sup>76</sup> [X].

<sup>77</sup> Paragraph 24.2 of Form M1.

<sup>78</sup> Paragraph 24.3 of Form M1.

result of a lack of competition between CR producers but rather the consequence of the limited number of customers in Singapore. [REDACTED].<sup>79</sup>

50. In view of the characteristics described above, the Parties submitted that the competitive effect of the Proposed Transaction must be assessed on a global basis and not with reference to the manner by which CR is distributed and sold in Singapore.<sup>80</sup>

#### *CCS's Assessment*

51. Based on information submitted by the Parties, CCS notes that the combined market share by volume of the Parties in the global supply of CR into Singapore is about [90-100]%. Information gathered from third-party market inquiries confirms that the combined market share (by volume) of the Parties is over [90-100]%. The Parties' own estimate of their market share is about [90-100]%. CCS notes that the use of volume as a basis for calculating market shares is appropriate due to the nature of CR. By volume, the combined market share of the Parties in the global supply of CR into Singapore exceeds CCS's indicative thresholds for a merger to raise competition concerns.<sup>81</sup> CCS also notes that post-transaction, the number of suppliers of CR into Singapore would reduce from around [REDACTED]. The three-firm concentration ratio ("CR3") would be [REDACTED] as compared to [REDACTED] pre-transaction.<sup>82</sup>
52. However, as submitted by the Parties, CCS notes that market shares based on the actual volume of CR supplied into Singapore may not be an accurate reflection of the level of competition in the relevant market. Based on information submitted by the Parties and CCS's market inquiries, the total value of the market for CR in Singapore is approximately [REDACTED].<sup>83</sup> The volume of Singapore's CR demand is small when compared to global CR production spare capacity.<sup>84</sup> [REDACTED] stated that they do not supply CR to customers in Singapore at the moment due to the very small size of the CR market in Singapore.<sup>85</sup> [REDACTED] also explained that the low level of demand for CR in Singapore is the key reason for the small quantity of CR sold by [REDACTED] in Singapore.<sup>86</sup> DuPont's internal

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<sup>79</sup> Paragraph 24.4 of Form M1.

<sup>80</sup> Paragraph 24.2 of Form M1.

<sup>81</sup> Paragraph 5.15 of the *CCS Guidelines on the Substantive Assessment of Mergers*, CCS is generally of the view that competition concerns are unlikely to arise in a merger situation unless the merged entity will have a market share of 40% or more, or the merged entity will have a market share of between 20% to 40% and with a post-merger CR3 at 70% or more.

<sup>82</sup> Assuming [REDACTED].

<sup>83</sup> [REDACTED].

<sup>84</sup> The issue of spare capacity in global CR production is discussed in paragraph 59 of this paper.

<sup>85</sup> [REDACTED] response dated 14 April 2015 to Question 6 of CCS's RFI dated 31 March 2015.

<sup>86</sup> [REDACTED] response dated 17 April 2015 to Question 1 of CCS's RFI dated 17 April 2015.

documents also demonstrate that CR sales in Asia Pacific are only small in value and made as and when demand arises. [REDACTED].<sup>87</sup>

53. In view of the above, to assess the impact of the Proposed Transaction on competition, it is therefore relevant to assess the impact on both actual and potential competition in the supply of CR into Singapore.

**(b) Actual and Potential Competition**

*Parties' Submission*

54. The Parties have listed the five entities below as their main competitors in the market for CR worldwide:

- a. Tosoh Corporation (Japan);
- b. Showa Denko (Japan);
- c. Lanxess AG (Germany);
- d. Shanna Synthetic Rubber Group Co., Ltd. (China); and
- e. Chongqing Changshou Chemical Co., Ltd. (China).<sup>88</sup>

55. The Parties submitted that the CR industry is currently characterised by excess CR production capacity, the ability for customers to switch between CR suppliers, the availability of cheaper CR substitutes and increasing competition from CR manufacturers in China that offer CR at lower prices.<sup>89</sup> In relation to excess capacity, the Parties have submitted that since 2009, the supply of CR has exceeded the demand for CR. This is due to CR manufacturers expanding and improving production capacity, customers increasingly turning to substitutes for CR and the economic recession in 2008.<sup>90</sup>

56. The Parties submitted that the key parameters influencing customer choice between CR suppliers are price, quality, conditions for supply (including the ability to supply a given quantity within a given timeframe) and technical services provided by CR manufacturers. Further, customers may consider the breadth of a CR manufacturer's product portfolio if they prefer to source both CR and other products from the same supplier.<sup>91</sup>

*CCS's Assessment*

57. CCS's third-party market inquiries found that, besides Denka and DuPont, [REDACTED]. The customers of CR indicated that the choice of CR supplier is

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<sup>87</sup> Annex 4 of the Parties' response dated 9 April 2015 to CCS's RFI dated 1 April 2015.

<sup>88</sup> Paragraphs 24.6 to 24.10 of Form M1.

<sup>89</sup> Paragraph 24.11 of Form M1.

<sup>90</sup> Paragraph 16.2 of the Parties' response dated 9 April 2015 to CCS's RFI dated 1 April 2015.

<sup>91</sup> Paragraphs 23.2 and 23.3 of the Parties' response dated 9 April 2015 to CCS's RFI, dated 1 April 2015.

dependent on the prices, quality and delivery time of CR offered by the supplier.<sup>92</sup> This indicates that current CR manufacturers compete based on price as well as other metrics, and that competition exists between the various CR manufacturers.

58. In relation to potential competitors, CCS finds that [X] are also likely to be able to supply CR into Singapore such as to be considered a competitive constraint. These potential competitors already have subsidiaries or sales offices in Singapore for the purposes of supplying other products into Singapore and this may facilitate their entry into the market for CR in Singapore. In their responses to CCS's request for information, they have indicated that they are confident of entering the Singapore market should there be a significant increase in demand for CR in the relevant applications in future.<sup>93</sup>
59. Due to the existence of spare capacity in CR production, competitors are able to expand production, and potential competitors who are not currently active in Singapore would be able to supply into Singapore should there be additional demand for CR. In fact, the existence of spare capacity in CR production is true for all global CR manufacturers. [X].<sup>94</sup>
60. Based on an industry report, the global CR production capacity utilisation rate is about [X] in 2014, and global CR demand has been consistently below CR production since 2009 (see Figures 2 and 3 in Annex B).<sup>95</sup> This situation of excess capacity is likely to continue at least until [X] (see Figure 4 in Annex B).<sup>96</sup> Annex B also provides a breakdown of the estimates of spare capacity of each global CR manufacturer. All producers of CR have excess capacity in CR production ranging from about [X] kilotons to [X] kilotons ("kt").<sup>97</sup> Given Singapore's current CR purchases from the Parties of about [X] MT or [X] kt, any of the global CR manufacturers can easily fulfil such demand with their spare capacity.

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<sup>92</sup> See [X] response dated 14 April 2015 to Questions 6 and 12 of CCS's RFI dated 31 March 2015; and [X] response dated 16 April 2015 to Question 7 of CCS's RFI dated 31 March 2015. [X] has also stated that they compete on the basis of a combination of price, quality and service, and that customers value price, quality, technical service and reliability of logistics ([X] response dated 14 April 2015 to Questions 9 and 11 of CCS's RFI, dated 31 March 2015).

<sup>93</sup> See [X] response dated 17 April 2015 to Question 2 of CCS's RFI dated 17 April 2015; and [X] response dated 14 April 2015 to Question 12 of CCS's RFI dated 31 March 2015.

<sup>94</sup> [X] response dated 14 April 2015 to Question 12 of CCS's RFI dated 31 March 2015.

<sup>95</sup> Global and China Chloroprene Rubber (CR) Industry 2013 Market Research Report by Beijing Hengzhou Bozhi International Information Consulting Co., Ltd (QYResearch), Annex 5 of the Parties' response dated 9 April 2015 to CCS's RFI dated 1 April 2015.

<sup>96</sup> Global and China Chloroprene Rubber (CR) Industry 2013 Market Research Report by Beijing Hengzhou Bozhi International Information Consulting Co., Ltd (QYResearch), Annex 5 of the Parties' response dated 9 April 2015 to CCS's RFI dated 1 April 2015.

<sup>97</sup> 1 kiloton (kt) is equal to 1,000 metric tons (MT).



61. In view of the above, CCS considers that post-transaction, the existing suppliers of CR in the supply of CR into Singapore and the global CR manufacturers who are currently not active in supplying CR into Singapore will place significant competitive constraints on the Parties post-transaction. This is especially so because of the excess capacity in CR production globally.

**(c) Barriers to Entry and Expansion**

*Parties' Submission*

62. The Parties submitted that for entities which are not current producers of CR, it would cost around [X] to build a new CR manufacturing plant. The capital expenditure required to produce 5% of the worldwide CR volume in 2013 (approximately [X] MT of CR) is around [X]. Based on Denka's annual expenditure for the financial year 2013, the annual expenditure on advertising/promotion required to achieve a worldwide CR market share of 5% (approximately [X] MT of CR) is approximately [X].<sup>98</sup>

63. Notwithstanding the above, the more relevant consideration for this Proposed Transaction is the ability of current CR global suppliers to supply CR into Singapore. In this regard, the Parties submitted that any one of the global CR manufacturers could easily expand their distribution network of CR into Singapore.<sup>99</sup> There are no specific barriers to entry hindering the global CR manufacturers from doing so. For example, there are no import levies imposed on products exported from Japan, China, Germany and USA. Hence, import levies are not a barrier to entry. There are also no regulations specifically related to Singapore that would affect the entry into Singapore CR market.<sup>100</sup> Due to the small numbers of customers in Singapore, suppliers do not typically rely on advertising or promotions in Singapore to sell their products. [X].<sup>101</sup>

64. In addition, most intellectual property rights relating to the manufacture of CR have entered the public domain. According to Singapore's IPOS database, there are only four patents registered in the database under the International Patent Classification of "Compositions of homopolymers or copolymers of chloroprene". Out of these four patents, only two patents held by Denka and Lanxess, are active.<sup>102</sup> The two remaining patents held

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<sup>98</sup> Paragraphs 26.1 and 26.2 of Form M1.

<sup>99</sup> Paragraph 24.14 of Form M1.

<sup>100</sup> Paragraphs 28.2 and 28.3 of Form M1.

<sup>101</sup> Paragraphs 27.1 and 27.2 of the Parties' response dated 9 April 2015 to CCS's RFI dated 1 April 2015.

<sup>102</sup> Denka owns a single patent in Singapore. Essentially, the patent relates to a composition comprising a chloroprene (sulphur-modified type), a carbon black and a plasticizer. The Parties submit that this patent does not constitute a barrier to entry. All the fundamental patents relating to CR production or

by Allegiance Corporation and W.R. Grace & Coconn have expired. Hence, patents do not constitute a barrier to entry in the CR business.<sup>103</sup> The Parties have also submitted that the European Commission had stated in a previous decision that “CR, which was first produced commercially in 1931 ... [does not] enjoy patent protection so that there are no technical barriers to the entry of new producers of these products.”<sup>104</sup> The technology required to enter the CR market is thus easily obtainable, and intellectual property rights should therefore not pose a significant barrier to entry.<sup>105</sup>

65. However, the Parties have also submitted that they are not aware of any entry or exit in the Singapore CR market in the past five years.<sup>106</sup>

#### *CCS’s Assessment*

66. Although CCS has not found any evidence of entry by any CR manufacturers into Singapore in recent years<sup>107</sup>, this is likely to be a result of the relatively low level of demand for CR in Singapore as set out above. CCS’s market inquiries have not revealed any significant barriers to entry that may hinder or prevent existing global CR manufacturers from expanding or entering the market for CR in Singapore. A CR manufacturer could supply into Singapore either through a subsidiary, through a distributor or supplying CR directly to customers. In third-party responses to CCS’s request for information, several CR manufacturers have indicated that they are not aware of any barriers to entry into the Singapore market. Furthermore, the barriers to entry and expansion into Singapore for existing global manufacturers of CR are low due to the presence of spare capacity for all manufacturers.<sup>108</sup>
67. With regard to the issue of intellectual property rights, CCS notes that intellectual property rights are not likely to be a significant barrier to entry because there is limited intellectual property associated with this business.<sup>109</sup>

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CR products have already expired. The other patent is owned by Lanxess. Denka does not have further details on this patent but Denka does not consider that this patent constitute a barrier to entry either. (Email response from the Parties dated 9 April 2015 to CCS’s RFI dated 1 April 2015).

<sup>103</sup> Paragraph 28.4 of Form M1.

<sup>104</sup> Paragraph 28.1 of the Parties’ response dated 9 April 2015 to CCS’s RFI dated 1 April 2015, and [http://ec.europa.eu/competition/mergers/cases/decisions/m663\\_en.pdf](http://ec.europa.eu/competition/mergers/cases/decisions/m663_en.pdf).

<sup>105</sup> Paragraph 28.4 of Form M1.

<sup>106</sup> Paragraph 29.1 of the Parties’ response dated 9 April 2015 to CCS’s RFI dated 1 April 2015.

<sup>107</sup> The only exception is [X] ([X] response dated 17 April 2015 to Question 1 of CCS’s RFI dated 15 April 2015).

<sup>108</sup> See for example, [X] response dated 14 April 2015 to Question 13 of CCS’s RFI dated 31 March 2015; [X] response dated 17 April 2015 to Question 2 of CCS’s RFI dated 17 April 2015; and [X] response dated 14 April 2015 to Question 13 of CCS’s RFI dated 31 March 2015.

<sup>109</sup> Annex 4 of the Parties’ response dated 9 April 2015 to CCS’s RFI dated 1 April 2015.

68. In addition, CCS has also found that distributors can help to facilitate the entry of global CR manufacturers into the Singapore market.<sup>110</sup> Distributors can also facilitate entry by playing a demand aggregation role, especially for smaller-scale end-users. Distributors are beneficial for end-users as these end-users can order in smaller quantities from the distributors according to their usage patterns.<sup>111</sup> This is valuable to both manufacturers and end-users of CR. Existing CR suppliers that are not currently active in Singapore may enter the Singapore market by building up a relationship with distributors in Singapore.<sup>112</sup>
69. Furthermore, CCS has found that there are no significant barriers to entry to being a distributor. For example, [X] explained that the main obstacle to entering the market as a distributor is for the distributor to convince the manufacturer that it can meet the expectations of the manufacturer as a distributor, with no other barriers to entry. [X] was able to become [X].<sup>113</sup> Other global CR manufacturers with presence in Singapore in relation to other products are likely to be able to include CR into their distributors' product range should there be demand for their CR in Singapore.
70. In view of the above, CCS considers that the barriers to entry and expansion for global CR manufacturers to supply CR into Singapore are low.

#### **(d) Countervailing Buyer Power**

##### *Parties' Submission*

71. The Parties submitted that the combined total number of customers purchasing CR from them in Singapore is only [X].
72. The Parties submitted that while it is unlikely for CR customers to self-supply CR given the costs of setting up a CR manufacturing plant<sup>114</sup>, customers nevertheless still have significant buyer power. Almost all customers, across all applications, purchase CR from multiple suppliers or at least have multiple suppliers "validated". "Validation" refers to a product qualification process which customers typically require CR suppliers to go through, before making purchase decisions, to assess whether the suppliers' CR would be able to meet the standards required for the customers' final products.<sup>115</sup>

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<sup>110</sup> [X] response dated 16 April 2015 to Question 8 of CCS's RFI dated 31 March 2015.

<sup>111</sup> [X] response dated 14 April 2015 to Question 8 of CCS's RFI dated 7 April 2015.

<sup>112</sup> Paragraph 14.1 of the Parties' response dated 9 April 2015 to CCS's RFI dated 1 April 2015.

<sup>113</sup> [X] response dated 16 April to Question 2 of CCS's RFI dated 15 April 2015.

<sup>114</sup> Paragraph 32.1 of Form M1.

<sup>115</sup> Paragraph 24.13 of Form M1.

73. By purchasing from multiple suppliers (or at least having multiple suppliers validated), customers ensure a stable supply of CR and maintain bargaining power. Customers typically use the prices offered by validated competitors as leverage when negotiating prices with a supplier. Based on the prices offered, customers often shift purchase volumes among validated suppliers (leading to fluctuations in CR market shares), but customers rarely terminate a relationship with a supplier (i.e. completely stop purchasing CR from a supplier), as doing so would reduce the customer's bargaining power.<sup>116</sup>
74. For customers that do not already have competing suppliers validated, these customers are still able to switch suppliers. However, these customers would need to take into account the time and cost involved in validating suppliers.<sup>117</sup> The time<sup>118</sup> and costs involved in a validation process for a CR supplier depends on the type of application that CR is used for. The Parties submitted that switching is frequent and easy for customers active in the field of rubber sheets and adhesives. These applications represent approximately [X]% of the CR demand in Singapore, and the entire CR demand for [X].<sup>119</sup>

#### *CCS's Assessment*

75. CCS's market inquiries indicated that end-users of CR do have buyer power. For example, [X] indicated that they are occasionally able to get their suppliers to maintain their previous purchase price. [X] also conducts internal materials testing on CR samples from various suppliers. Once the testing is approved internally, purchase decisions are based on price and delivery time. Based on current prices and lead time, [X] has switched between different suppliers.<sup>120</sup>
76. CCS also notes that some of the Parties' customers in Singapore are part of multinational groups. The entities of these multinational groups outside Singapore may also require CR and negotiations on CR purchases may be conducted at the headquarters-level. This increases the buyer power of the customers of CR in Singapore, despite the relatively low demand for CR in Singapore, since they have the option of buying CR at prices negotiated on a global basis.<sup>121</sup>

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<sup>116</sup> Paragraph 32.2 of Form M1.

<sup>117</sup> Paragraph 32.2 of Form M1.

<sup>118</sup> Qualification process typically takes [X] (Paragraph 24.2 of the Parties' response dated 9 April 2015 to CCS's RFI dated 1 April 2015).

<sup>119</sup> Paragraphs 6.1 and 6.2 of the Parties' response dated 20 April 2015 to CCS's RFI dated 13 April 2015.

<sup>120</sup> [X] response dated 14 April 2015 to Questions 6, 7, 11, 12 and 15 of CCS's RFI dated 31 March 2015.

<sup>121</sup> See for example, [X] response dated 16 April 2015 to Questions 1, 6 and 16 of CCS's RFI dated 31 March 2015.

77. Furthermore, the excess capacity in the production of CR globally would mean that manufacturers who are already actively selling CR in Singapore (such as the Parties, [X]) would be constrained in their pricing and other activities including quality control and service standards. Manufacturers of CR would lack the incentive to unilaterally raise prices, as end-users can easily switch to CR from other manufacturers which already have the spare capacity to meet demand. They would also have incentives to keep existing customers through competitive pricing so as to maintain production of CR as close to their capacity as possible. This is supported by [X].<sup>122</sup>
78. In view of the above, CCS considers that customers of CR enjoy countervailing buyer power, and are able to switch to alternative validated suppliers should the merged entity attempt to raise prices or reduce service levels.

## **IX. Competition Assessment**

### *Formation of the JV between Denka and Mitsui*

79. CCS understands that the JV between Denka and Mitsui was formed solely for the purposes of acquiring and running DuPont's CR business. In particular, CCS notes the Parties' submission that the JV will be subsequently dissolved should it be clear that the acquisition of DuPont's Global Neoprene Business (i.e. the Proposed Transaction) will not take place.<sup>123</sup> Hence, in conducting a competition assessment of the Proposed Transaction, CCS has taken into account the impact (if any) of the formation of the JV on competition in Singapore.
80. In its assessment, CCS focused on the potential vertical issues which may arise in the market for the global supply of CR into Singapore given that Mitsui, a distributor of CR into Singapore, is a party to the joint venture with Denka. Potentially, the formation of the JV may affect Mitsui's incentives to distribute the CR of Denka's (actual or potential) competitors into Singapore.
81. [X].<sup>124</sup> Further, as set out in paragraph 69 above, there appears to be no significant barriers to entry for distributors to enter the market in Singapore. As such, Denka's (actual or potential) competitors are not precluded from working with other distributors should they choose to supply CR into Singapore through distributors. In any event, it is

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<sup>122</sup> Annex 4 of the Parties' response dated 9 April 2015 to CCS's RFI dated 1 April 2015.

<sup>123</sup> Paragraphs 11.1 and 38.1 of Form M1. Paragraph 1.1 of the Parties' response dated 20 April 2015 to CCS's RFI dated 13 April 2015.

<sup>124</sup> Paragraph 10.1 of the Parties' response dated 9 April 2015 to CCS's RFI dated 1 April 2015.

noteworthy that CR manufacturers are also able to enter the market without a distributor by selling CR directly into Singapore.

82. In view of the above, CCS considers that the formation of the JV (in itself) is unlikely to substantially lessen competition within Singapore.

### *The Proposed Transaction*

#### **(a) Non-coordinated Effects**

83. Non-coordinated effects may arise where, as a result of the Proposed Transaction, the merged entity finds it profitable to raise prices (or reduce output or quality) because of the loss of competition between the merged entities.<sup>125</sup>
84. As noted in paragraph 51, while the combined market shares of the Parties in the global supply of CR in Singapore is large (approximately [90-100]%), the large market share of the Parties post-transaction may not fully reflect the extent of competition in the relevant market. In addition to market shares, CCS also considered whether the other global CR manufacturers exert sufficient competitive constraint on the Parties.
85. As set out in paragraphs 57 to 61 above, CCS's assessment is that existing suppliers who currently supply CR into Singapore and the global CR manufacturers who are currently not active in their supply into Singapore will place significant competitive constraints on the Parties post-transaction. This is especially the case because of the excess capacity in CR production globally. CCS also found that the barriers to entry and expansion for global CR manufacturers to supply CR into Singapore are low (see paragraph 70 above).
86. Further, as set out in paragraph 78 above, customers are able to switch between different CR suppliers. Such countervailing buyer power is likely to persist post-transaction and will continue to exert a competitive constraint on the Parties. CCS further notes that customers have not expressed any concerns with the Proposed Transaction in CCS's market inquiries.
87. Therefore, given that other CR manufacturers are likely to continue to exert competitive constraint on the Parties – there is excess capacity in the CR market and there are low barriers to expansion and entry – and there is countervailing buyer power of customers, CCS concludes that the Proposed Transaction is unlikely to raise concerns of non-coordinated effects.

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<sup>125</sup> Paragraph 6.3 of the *CCS Guidelines on the Substantive Assessment of Mergers*.

## **(b) Coordinated Effects**

88. A merger may also lessen competition substantially by increasing the possibility that, post-merger, firms in the same market may coordinate their behaviour to raise prices, or reduce quality or output. Given certain market conditions, and without any express agreement, tacit collusion may arise merely from an understanding that it will be in the firms' mutual interests to coordinate their decisions. Coordinated effects may also arise where a merger reduces competitive constraints in a market, thus increasing the probability that competitors will collude or strengthen a tendency to do so.<sup>126</sup>
89. As noted in paragraph 51, the estimated CR3 is high at [90 – 100]% and this may suggest that the relevant market is highly concentrated. However, CCS notes that the Proposed Transaction does not give rise to a significant increase in CR3.
90. In addition, as highlighted in paragraph 58 above, CCS did not find any significant barriers to entry that may hinder or prevent global CR manufacturers from entering the market for CR in Singapore. Further, as noted in paragraph 69 above, there appears to be no significant barriers to entry for distributors to enter the market in Singapore.<sup>127</sup> Such factors reduce the ability of existing competitors in the market to coordinate their behaviour to raise prices, or reduce quality or output, as any increase in price may attract potential CR manufacturers and/or CR distributors to enter the market for CR in Singapore. The presence of spare capacity in CR production globally also reduces the incentives of CR manufacturers to maintain any collusion agreement.
91. Third-party feedback also indicates that customers and manufacturers do engage in price negotiations and it is noted that the manufacturers do provide price reductions off the listed price to customers in Singapore.<sup>128</sup> As highlighted in paragraph 76 above, for customers who are part of a multinational group, the price negotiations take place at a headquarter level and in some instances more favourable prices may be given due to the long term working relationship between the customer and the CR manufacturer.<sup>129</sup> With such negotiations conducted at various levels (i.e. local level or headquarter level) and instances of manufacturers providing price reductions off the listed price, CCS is of the view that it is difficult for the firms in the market to coordinate their behaviour and monitor their competitors' prices.

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<sup>126</sup> Paragraph 6.7 of *CCS Guidelines on the Substantive Assessment of Mergers*.

<sup>127</sup> [redacted] response dated 16 April 2015 to Question 2 of CCS's RFI dated 15 April 2015.

<sup>128</sup> [redacted] response dated 17 April 2015 to Question 5 of CCS's RFI dated 15 April 2015.

<sup>129</sup> [redacted] response dated 16 April 2015 to Questions 1, 15 and 16 to CCS's RFI dated 31 March 2015.

92. CCS also accepts the Parties' submission that there is no price transparency on the market<sup>130</sup>, given that contracts are negotiated between customers and manufacturers, and that prices may vary depending on the specific type of CR supplied (which in turn depends on the specific application that CR is used for). Even if the CR suppliers were capable of reaching a common understanding, CCS is of the view that it would be difficult to monitor compliance with any understanding.
93. Notwithstanding the high market share and CR3 of the Parties post-transaction, CCS concludes that the Proposed Transaction is unlikely to raise concerns of coordinated effects because there are low barriers to entry for both manufacturers and distributors, and there is difficulty in monitoring prices and compliance with any common understanding.

## **X. Efficiencies**

### *The Parties' Submission*

94. The Parties submitted that the efficiencies to be gained by the Proposed Transaction include the following<sup>131</sup>:
- a. cost savings through a reduction in the costs of production;
  - b. higher quality of service and greater innovation and product improvement to DuPont's customers;
  - c. greater choice for sourcing CR for customers with global operations; and
  - d. stabilisation of Denka's CR supply to meet consumer demands.

### *CCS's Assessment*

95. Given that the above competition assessment did not point to a substantial lessening of competition, CCS is of the view that it is not necessary to make an assessment on any claimed efficiencies by the Parties.

## **XI. Ancillary Restraints**

### *The Parties' Submission*

96. The Parties submitted that the following constitutes an ancillary restriction to the Proposed Transaction.
97. Section 5.1 of the APSA provides that, [~~§~~].<sup>132</sup>

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<sup>130</sup> Paragraph 35.1 of Form M1.

<sup>131</sup> Paragraphs 42.3 to 42.14 of Form M1.

<sup>132</sup> Paragraph 43.1 of Form M1; and Section 5.1 of the APSA.



98. The Parties submitted that [X]. It is necessary for Denka and Mitsui to obtain full value of the assets they acquire, [X]. It should be noted that the protection is limited in time and contains exceptions”.<sup>133</sup>

#### *CCS's Assessment*

99. CCS is of the view that the [X], insofar as it impacts a market in Singapore, does not exceed the scope of the transaction. Specifically, the restriction is limited to the scope of business of the merged entity [X]. Further, the restriction is limited to a period of [X].

100. CCS also accepts the submissions made in paragraph 98 above and is therefore satisfied that the [X] is directly related and necessary to the implementation of the Proposed Transaction.

101. CCS concludes that the [X] constitutes an agreement falling within the exclusion under paragraph 10 of the Third Schedule of the Act insofar as it applies to Singapore.

## **XII. Conclusion**

102. For the reasons above and based on the information available, CCS assesses that the Proposed Transaction is unlikely to lead to a substantial lessening of competition and accordingly, will not infringe the section 54 prohibition if carried into effect. In accordance with section 57(7) of the Act, this decision shall be valid for a period of one year from the date of this decision.

103. For the avoidance of doubt, the Parties' joint notification pursuant to section 57 of the Act for a decision by CCS is only in relation to the Proposed Transaction, in particular, whether the *proposed acquisition* of DuPont's Global Neoprene Business by the existing JV between Denka and Mitsui will infringe the section 54 prohibition of the Act, if carried into effect. As such, CCS's clearance decision in paragraph 102 above applies only to the Proposed Transaction, and not to the related formation of the JV between Denka and Mitsui.



Toh Han Li  
Chief Executive  
Competition Commission of Singapore

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<sup>133</sup> Paragraph 43.2 of Form M1.

## Viable substitutes for applications of CR

Type of Application or Processes / Usage Segment	Substitutes <sup>134</sup>
Adhesive material for woods, metal, fabric, laminates	PU, hot melt, acrylic, EVA, epoxy, SBR, NBR, phenolic, and others
Automotive belts (OEM and aftermarket)	EPDM, HNBR, metal
Boots	TPE, EPDM
Wipers	NR, SBR
Air Springs	NR, SBR
Other Automotive	The substitutes vary according to the application.
Hoses (automotive and industrial)	NBR, CPE, FKM, ECO, SBR, NR
Conveyor belts	NR, SBR
Industrial belts	EPDM, SBR
Other industrial	The substitutes vary according to the application.
Compounds	Almost all types of synthetic rubbers may be substitute products.
Sponge (such as wetsuits)	SBR
Bearing rubbers	NR, NBR, IR, silicone, HNBR, EPDM
Rubber sheets	Almost all types of synthetic rubbers may be substitute products.
Gloves	NR, NBR, NBR-PVC blend
Cables	EPDM, CPE

<sup>134</sup> “PU” is polyurethane; “EPDM” is ethylene-propylene diene monomer; “SBR” is styrene-butadiene rubber; “NBR” is nitrile butadiene rubber; “HNBR” is hydrogenated nitrile butadiene rubber; “NR” is natural rubber; “TPE” is thermoplastic elastomer; “CPE” is chlorinated polyethylene; “FKM” is fluoro rubber; “ECO” is epichlorohydrin rubber; “IR” is isoprene rubber; “PVC” is polyvinyl chloride; and “EVA” is ethylene-vinylacetate.

**Figure 2: Global CR Capacity Utilisation 2009 -2014 (kt)<sup>135</sup>**

[✂]

**Figure 3: Global CR Surplus 2009 -2014 (kt)<sup>136</sup>**

[✂]

**Figure 4: Global CR Capacity Utilisation Projection 2014 -2019 (kt)<sup>137</sup>**

[✂]

**CR Production Spare Capacity of Major Manufacturers 2009 – 2014 (kt)<sup>138</sup>**

*DuPont*

[✂]

*Denka*

[✂]

*Showa Denko (Japan)*

[✂]

*Tosoh Corporation (Japan)*

[✂]

*Lanxess AG (Germany)*

[✂]

*Chongqing Changshou Chemical Co., Ltd. (China)*

[✂]

*Shanxi Synthetic Rubber Group, parent company of Shanna Synthetic Rubber Group Co., Ltd (China)*

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<sup>135</sup> Global and China Chloroprene Rubber (CR) Industry 2013 Market Research Report by Beijing Hengzhou Bozhi International Information Consulting Co., Ltd (QYResearch), Annex 5 of the Parties' response dated 9 April 2015 to CCS's RFI dated 1 April 2015.

<sup>136</sup> Global and China Chloroprene Rubber (CR) Industry 2013 Market Research Report by Beijing Hengzhou Bozhi International Information Consulting Co., Ltd (QYResearch), Annex 5 of the Parties' response dated 9 April 2015 to CCS's RFI dated 1 April 2015.

<sup>137</sup> Global and China Chloroprene Rubber (CR) Industry 2013 Market Research Report by Beijing Hengzhou Bozhi International Information Consulting Co., Ltd (QYResearch), Annex 5 of the Parties' response dated 9 April 2015 to CCS's RFI dated 1 April 2015.

<sup>138</sup> Global and China Chloroprene Rubber (CR) Industry 2013 Market Research Report by Beijing Hengzhou Bozhi International Information Consulting Co., Ltd (QYResearch), Annex 5 of the Parties' response dated 9 April 2015 to CCS's RFI dated 1 April 2015.