

## FORM IV

**DISCLAIMER**

*Under Section 29(2) of the Competition Act 2002, the Competition Commission of India, if it is of the prima facie opinion that the combination has, or is likely to have, an appreciable adverse effect on competition, shall direct the parties to the said combination to publish details of the combination for bringing it to the knowledge or information of the public and persons affected or likely to be affected by such combination. In accordance with the provisions of Section 29(2) of the Act, the Hon'ble Commission requires E. I. du Pont de Nemours and Company, The Dow Chemical Company, DowDuPont Inc., Diamond Merger Sub Inc., and Orion Merger Sub Inc. to publish details of the proposed combination. The contents given herein do not represent in any manner the views of the Commission and do not prejudice the view that the Commission may take of the proposed combination. The Commission is not responsible for any incorrect or misleading information contained herein.*

**Details of combination under subsection (2) of Section 29 of the Competition Act, 2002**

- I. The Competition Commission of India (**Commission**) is investigating into the combination between E. I. du Pont de Nemours and Company (**DuPont**), The Dow Chemical Company (**Dow**), DowDuPont Inc. (**DowDuPont**), Diamond Merger Sub Inc. (**Diamond Merger Sub**), and Orion Merger Sub Inc. (**Orion Merger Sub**), having their registered office address at 2030 Dow Center, Midland, Michigan, 48674, United States of America (for Dow, DowDuPont, Diamond Merger Sub, and Orion Merger Sub) and 974 Centre Road, Wilmington, Delaware 19805, United States of America (for DuPont).
- II. The details of the combination in form of the summary, as provided by the parties to the combination under column 1 of Form II are as under:

**PARTIES TO THE COMBINATION**

1. **DuPont** is a global science and engineering company that has been in existence since 1802. DuPont is active in various segments such as agriculture, electronics and communications, industrial biosciences, nutrition and health, performance chemicals, performance materials, and safety and protection. Please note that the gross assets and turnover values of the Indian companies that either manufacture or sell products under a license or otherwise and as mentioned are those in which E.I. du Pont de Nemours and Company, the ultimate parent entity of the DuPont group, may have indirect equity interests. E.I. du Pont de Nemours and Company has no direct equity interest in these Indian companies, their assets or properties or business. E.I. du Pont de Nemours and Company has no direct presence in India, does not carry on any business directly in India and does not directly own any properties or assets in India.

2. **Dow** is a global science and technology company active in chemical, plastic, and agricultural products and services to consumer markets that include food, transportation, health and medicine, personal care, and construction, and operates in approximately 180 countries. Please note that the gross assets and turnover values of the indirect Indian subsidiaries of Dow that either manufacture and / or sell products under a license or otherwise are those in which Dow may have an indirect equity interest. Dow has no direct equity interest in these Indian companies nor in their assets or properties or business. Dow has no direct presence in India, does not carry on any business directly in India and does not directly own any properties or assets in India.

#### **NATURE OF THE COMBINATION**

3. On 11 December 2015, the Parties entered into a definitive agreement and plan of merger by which DuPont and Dow will combine in an all stock merger of equals (the **Proposed Transaction**). The combined entity will be named DowDuPont. Following completion of the Proposed Transaction, the Parties intend to create three separate publicly listed companies. The three companies are intended to be independent and to include (a) a pure-play agriculture company, (b) a pure-play material sciences company, and (c) a speciality products company.
4. Based on its valuation upon announcement of the Proposed Transaction, the combined entity will have a market capitalization of approximately USD 130 billion. Under the terms of the Proposed Transaction, DuPont shareholders will receive a fixed exchange ratio of 1.282 shares of DowDuPont for each DuPont share, and Dow shareholders will receive a fixed exchange ratio of 1.00 share of DowDuPont for each Dow share. DuPont and Dow shareholders will each own approximately 50 percent of the combined company, on a fully diluted basis, excluding preferred shares. Details of the Proposed Transaction are also available at: [www.dowdupontunlockingvalue.com](http://www.dowdupontunlockingvalue.com).

#### **AREA OF ACTIVITIES OF THE PARTIES TO THE COMBINATION**

5. DuPont is a global science and engineering company that has been in existence since 1802. DuPont is broadly active in the following business areas: (a) Agriculture (including seeds), (b) Electronics and Communications, (c) Industrial Biosciences, (d) Nutrition and Health, (e) Performance Chemicals, (f) Performance Materials, and (g) Safety and Protection. More information on DuPont and its global portfolio of products is available at <http://www.dupont.com>.
6. Dow's global integrated, market-driven, portfolio of specialty chemicals, advanced materials, agrosiences, and plastics businesses delivers a broad range of technology-based products and solutions to customers, in approximately 180 countries and in high-growth sectors such as packaging, electronics, water, coatings, and agriculture. Its key business segments include Agricultural Sciences, Consumer Solutions, Infrastructure Solutions, Performance Materials and Chemicals, and Performance Plastics. Dow AgroSciences India Private Limited (**DAS India**), an indirect subsidiary of Dow, manufactures and sells agrochemicals and associated products in

India. More details on Dow and its global product portfolio is available at <http://www.dow.com>.

#### **Economic rationale of the combination**

7. The Parties view the combination as a good strategic, financial, operational, and cultural fit for their respective existing activities. One of the Parties' main considerations in contemplating the Proposed Transaction has been the complementary nature of their respective product bases on a worldwide basis. The Proposed Transaction is expected to deliver approximately USD 3 billion in cost synergies, with 100 percent of the run-rate cost synergies achieved within the first 24 months following the closing of the Proposed Transaction. An additional upside of approximately USD 1 billion is expected from growth synergies stemming from additional sales opportunities, e.g., from cross-selling.

#### **THE MARKET(S) IN WHICH THE COMBINATION WILL HAVE OR IS LIKELY TO HAVE AN IMPACT**

8. The Parties' activities are highly complementary. The Indian entities overlap in certain number of areas: Agrochemicals (Insecticides, Fungicides and Herbicides); Seeds (Corn); Material Science (High Pressure Ethylene Derivative (*HIPED*) products,<sup>1</sup> with overlaps in the sub-segments acid-copolymers, acrylate co-polymers, and MAH grafted polymers in India); purified CMC (carboxymethylcellulose). According to the Parties, as a result of the different focus of their respective business activities, the Proposed Transaction does not give rise to a significant increment in any of these business areas. The Parties do not consider that these individual business areas represent clearly-defined "markets" for the purposes of antitrust analysis.

#### **COMPETITIVE ASSESSMENT UNDER SECTION 20(4) OF THE COMPETITION ACT**

9. As will be demonstrated below, the Parties submit the Proposed Transaction does not cause an appreciable adverse effect on competition (**AAEC**) in any of the overlapping business areas:

#### **AGROCHEMICALS**

10. The market for Agrochemicals (insecticides, fungicides and herbicides) in India is highly competitive and has not seen any disruptive innovation recently. The Proposed Transaction will not result in any AAEC in the market for agrochemicals in India, or in any of the narrower sub-segments, where the Parties have an overlap. For the purposes of conducting the competitive assessment, the Parties have divided the products into three broad categories, which are:
  - (a) Overlapping segments where the Parties combined shares are less than 15%;
    - Insecticides* – insecticides (Overall), insecticides for brinjal, Insecticides for chillies that target sucking pests, insecticides for cotton, broad spectrum insecticides for cotton, insecticides for cotton that target sucking pests, insecticides for groundnut, insecticides for potato, insecticides for pulses/ grains, insecticides for rice, broad spectrum insecticides for rice, broad spectrum insecticides for sugarcane, insecticides for tea/coffee, insecticides for other vegetables, broad

spectrum insecticides for other vegetables, and insecticides for other vegetables that target sucking pests.

*Fungicides* - fungicides (Overall), fungicides for chillies, fungicides for cotton, fungicides for potato, fungicides for rice, fungicides for tomato, fungicides for other vegetables

*Herbicides* – herbicides (Overall), herbicides for rice, broadleaf herbicides for rice, and graminicides for soyabean.

- (b) Overlapping segments where the Parties combined shares are more than 15% but the increment is minimal (i.e., less than 5%); and

*Insecticides* – broad spectrum insecticides for chillies (Combined – 30-35% (increment – 0-5%) Value; Combined – 10-15% (increment – 0-5%) Volume), broad spectrum insecticides for pulses/grain (Combined – 15- 20% (increment – 0-5%) Value; Combined – 0-5% (increment – 0-5%) Volume), insecticides for sugarcane (Combined – 45- 50% (increment – 0-5%) Value; Combined – 5- 10% (increment – 0-5%) Volume), other insecticides (Combined – 15-20% (increment – 0-5%) Value; Combined – 0-5% (increment – 0- 5%) Volume), other insecticides that target chewing pest (Combined – 10-15% (increment – 0- 5%) Value; Combined – 20-25% (increment – 0-5%) Volume).

*Herbicides* – herbicides for soyabean (Combined – 0-5% (increment – 0-5%) Value; Combined – 15-20% (increment – 0-5%) Volume).

- (c) Overlapping segments where the Parties combined shares are more than 15% and the increment is not minimal (i.e., more than 5% in some cases).

*Insecticides* – insecticides for chillies (Combined – 15-20% (increment – 5-10%) Value; Combined – 10-15% (increment – 5-10%) Volume), insecticides for cotton that target chewing pests (Combined – 20-25% (increment – 0-5%) Value; Combined – 10-15% (increment – 0-3%) Volume), insecticides for groundnut that target chewing pests (Combined – 25-30% (increment – 10-15%) Value; Combined – 5-10% (increment – 0-5%) Volume), broad spectrum insecticides for potato (Combined – 15-20% (increment – 0-5%) Value; Combined – 0-5% (increment – 0-5%) Volume), insecticides for sugarcane that target chewing pests (Combined – 25-30% (increment – 0-5%) Value; Combined – 10-15% (increment – 5-10%) Volume).

*Fungicides* – fungicides for grapes (Combined – 5-10% (increment – 0-5%) Value; Combined – 20-25% (increment – 0-5%) Volume); Fungicides for grapes that target the fungal disease, Ascomycota (Combined – 35-40% (increment – 5-10%) Value).

**Note:** The market shares are based on 3<sup>rd</sup> party independent database, i.e., CropLife India (for value shares) and GfK Sigma's Agrowin dataset (for volume shares).

(i) ***Market share in the relevant market of the persons or enterprise in a combination, individually and as a combination***

11. In most markets, the Parties combined market shares are below 15%. Where there are over 15% in several cases, the increment is negligible, i.e. between 0% and 5%.

12. The Parties submit that the combinations where the parties' combined market shares are minimal do not raise concerns under the Competition Act, 2002 (**Competition Act**).<sup>2</sup> Further, in the markets where the Parties combined market shares are over 15 % and the increment is not minimal, the Parties note that the increment in relation to insecticides for chillies, insecticides for cotton that target chewing pests, and insecticides for sugarcane that target chewing pests is still low.
  13. In the segment of insecticides for groundnuts that target chewing pests, whilst the combined shares by value are over 15% and the increment is not minimal, DuPont and DAS India have substantially smaller shares by volume, clearly indicating that their products sold in this segment are not the volume leaders. Therefore, the ability of the combined entity to affect a large section of consumers for these products is minimal. In this case, FMC and Gharda would continue to have a larger market share than that of the combined entity.
  14. In the segment of broad-spectrum insecticides for potato, the combined market shares of the Parties is over 15%. However, the increments in market shares are insubstantial. Further, the low volume market shares of the Parties indicates that they play a minor role in the segment and face stiff competition from larger volume players such as Syngenta, FMC (including Cheminova) and Bayer CropScience.
  15. In the segment of insecticides for sugarcane that target chewing pests, the combined market shares of the Parties is over 15%. However, the increments in market shares are insubstantial.
  16. Therefore, for the segments described above, where neither party has a significant market share and where there is a minimal or small increment, there is no question of the Proposed Transaction causing an AAEC. The lack of a material change in the market shares as a result of the combination makes it clear that there will be neither AAEC nor any likelihood of AAEC in these segments in India.
- (ii) ***Likelihood that the combination would result in the removal of a vigorous and effective competitor or competitors in the market***
17. The Proposed Transaction will not result in the removal of any vigorous and effective competitor or competitors, which would restrain full and effective competition. Further, even though the Parties compete against one another in the segments outlined above, they are not each other's closest competitors. The Parties are not the two largest players in this market and given the Parties' low market shares, existing competitors will continue to pose a competitive constraint on the combined entity after the completion of the Proposed Transaction. Therefore, the Proposed Transaction will not give rise to an AAEC in the potential relevant markets or their sub-segments.
- (iii) ***Actual and potential level of competition in the market; and Extent of effective competition likely to sustain in a market***
18. The potential relevant markets for agrochemicals and the sub-segments outlined above are highly competitive and contain several established players – many of whom are large companies – strongly competing for customers. There are 6 significant competitors of the Parties including

Syngenta, Bayer CropScience, Rallis, United Phosphorous Limited, Pi-Industries, Coromandel, and FMC (including Cheminova). These competitors will continue to exert significant competitive constraints on the combined entity.

19. The strong existing level of competition will remain after the Proposed Transaction. It is therefore inconceivable that the Parties would be able to sustain any anti-competitive price increase or profit margins, as any attempt to do so would be immediately defeated by the ability of competitors to supply similar products at lower prices. It is submitted that given that large multinational and local agrochemical companies operate in the potential relevant market they constrain the actions of the Parties.

**(iv) *Likelihood that the combination would result in the parties to the combination being able to significantly and sustainably increase prices or profit margins***

The Proposed Transaction will not provide any ability to the Parties to significantly and sustainably increase prices or profit margins in the potential relevant market or any sub-segments thereof. The Parties submit that they do not possess market power and, therefore, cannot increase prices or profits sustainably. Further, even if a company has a higher market share in relation to a particular crop segment, but the same product is applied to other crops in which the company has lower market share, the company will be forced to keep price parity for different crop segments for the reasons outlined above. As noted previously, these market segments contain several players, with seven significant competitors who will continue to exert significant competitive constraints on the combined entity.

**(v) *Degree of countervailing power***

20. Both Parties sell the vast majority of their agrochemicals to distributors, rather than farmers, who play a key role in informing farmers about which products they should use, at what time, against which weeds, and on which crops. As such, they have a major impact on the product choice of the farmers. Distributors face no barriers to switching to competing suppliers, as supply agreements are not exclusive. Similarly, farmers are increasingly becoming aware of the price differentials between branded products and generic products. There exist a large number of competitors offering similar/substitutable products. Availability of significant choice to consumers and the ability of the consumer to easily switch from one particular agrochemical product to another constrain the pricing behaviour of the sellers.

**(vi) *Level of combination***

21. The Parties note that the relevant market in which their activities overlap characterized by a large number of significant competitors. Further, given the large number of active competitors, the relevant market is not concentrated.

**(vii) Nature and extent of innovation**

22. From an Indian perspective, given that the substantial majority of the agrochemicals products are based on off-patent molecules, R&D is not critical for the Indian companies to enter these markets. The Proposed Transaction and subsequent spin-off of the agriculture business into an independent company will create a focused agricultural player with increased sales volume and dedicated funds necessary to undertake risky R&D. The Proposed Transaction will strengthen the Parties' R&D capabilities, create a stronger global number four crop protection player, and increase competitive pressure. The merged new DowDuPont Agriculture company will be a focused agricultural player that will benefit from DuPont's and DAS' combined R&D expertise and capabilities, a larger R&D budget than the individual entities, and the fact that it will no longer need to compete with other businesses within the same corporate groups for funding.

**(viii) Extent of barriers to entry into the market**

23. It is a well-accepted fact that the Indian agrochemicals industry is dominated by off-patent molecules. In particular the Indian crop protection industry is dominated by generic products with more than 80% of molecules being non-patented (Ushering in 2<sup>nd</sup> Green Revolution: Role of Crop Protection Chemicals: Report on Indian Agrochemical Industry; November 2015) which ensures that the Parties face fierce competition. Further, as reported by the Pesticide Monitoring Unit, GOI, there more than 219 technical grade/ manufacturing units and over 4000 formulation units making the industry highly fragmented and competitive. Given these facts, there are *very low entry barriers for the industry*. Given the peculiar nature of the Indian agrochemicals industry where hundreds of manufacturers compete for customers, the Parties submit that the barriers to entry are extremely low and do not deter new entry.

**(ix) Extent to which substitutes are available or are likely to be available in the market**

24. The Parties submit that in this potential relevant market and sub-segments thereof, there are eight strong and active competitors, as is evident from the data. Consumers have a wide choice between competing products, all of which are easily available.

**(x) Whether the benefits of the combination outweigh the adverse impact of the combination, if any**

25. It is submitted that the combination will have no adverse effect whatsoever and, therefore, the question of whether efficiencies would outweigh any potential AAEC should not even arise. However, both DuPont India and DAS India are committed to provide best in class products to the consumers in India. Further, as stated previously, the Parties will be able to realize substantial efficiencies through the Proposed Transaction.

## SEEDS

The activities of the Parties overlap only in relation to the sale of corn seeds in India.

**(i) *Market share in the relevant market of the persons or enterprise in a combination, individually and as a combination***

26. Combined market shares (based on internal estimates) in relation to the corn seeds markets are not significant (combined 25-30% (Value); 20-25% (Volume); increment is minimal i.e., 0-5%), as DAS India's share of sales is minimal in terms of both value and volume. As a consequence, the share increment resulting from the Proposed Transaction is insignificant. Further, there are at least 5 other significant competitors (Syngenta, Kaveri Seeds, Nuziveedu Seeds, CP Seeds, Monsanto) in this market, with a sales share of more than 5%. In addition to these competitors, there are a considerable number of competitors larger than DAS India, who have sales shares of between 0-5%, demonstrating that the corn seed sector is highly fragmented and competitive. As a consequence of DAS India's negligible share of sales in the corn seed sector, the change in HHI as a result of the Proposed Transaction is also negligible. Therefore, the Proposed Transaction is not likely to cause an AAEC on competition in this potential relevant market.

**(ii) *Likelihood that the combination would result in the removal of a vigorous and effective competitor or competitors in the market***

27. The combination will not result in the removal of a vigorous and effective competitor, or competitors, in the corn seeds market, to the prejudice of full and effective competition in the market. Further, even though DuPont and DAS India compete against one another in the supply of corn seeds, they are not each other's closest competitors, which is evident from the volume of sales and DAS India's limited sales.

**(iii) *Actual and potential level of competition in the market; and Extent of effective competition likely to sustain in a market***

28. The corn seed sector in India is highly competitive. The potential market has several established players (as noted previously) – which include a combination of leading global multinational corporations and domestic manufacturers - strongly competing for customers. DAS India's share of sales is insignificant, and the combination will barely affect either the competition or the market concentration or structure in any discernible manner. The strong actual level of competition in the sector will remain.

**(iv) *Likelihood that the combination would result in the parties to the combination being able to significantly and sustainably increase prices or profit margins***

29. The Proposed Transaction will not create any ability to significantly and sustainably increase prices or profit margins in the supply of corn seeds in India, because the increment brought about by the Proposed Transaction is insignificant. The Parties submit that the DuPont entities and DAS India do not possess any market power and, therefore, cannot increase prices.

**(v) Nature and extent of innovation**

30. While most market participants invest in R&D, it does not act as a significant entry barrier for the corn seeds business in India. Genetics are available through public and private entities. Seed production can be contracted via third parties. There are a large number of distributors and retailers. Given these factors, there will be no disruption in the current state of innovation in the market. Therefore, the Proposed Transaction will not confer any advantage on DuPont and DAS India resulting in an AAEC.

**(vi) Extent of barriers to entry into the market**

31. The Parties submit that whilst a number of regulatory approvals may be required in India for manufacturing or marketing a particular seed and whilst obtaining regulatory approvals may be a time consuming process, they are not difficult to obtain. And, many competitors have secured these approvals.

**(vii) Level of combination in the market**

32. The Parties note that the corn seed sector will not be highly concentrated following the Proposed Transaction. At least five additional significant competitors will remain following the Proposed Transaction and will continue to exert significant competitive constraints on the combined entity.

**(viii) Degree of countervailing power in the market**

33. The Parties note that because of the multiple choices available to farmers, the DuPont entities and DAS India can easily switch to alternative corn seed suppliers. End users and/or retail consumers, who constitute the customer base for corn seeds, are increasingly becoming aware of the price differentials between various products. Towards this end, local retailers who have direct connect with the farmers also help reduce the cost by offering a lower priced but equally effective product. Further there exist a large number of competitors offering similar products.

**(ix) Extent to which substitutes are available or are likely to be available in the market**

34. The Parties submit that there are at least five additional strong and active competitors in the corn seeds business, as is evident from the data, as well as a very large number of smaller competitors. Consumers have a wide choice of competing suppliers from whom to source their requirements.

**(x) Whether the benefits of the combination outweigh the adverse impact of the combination, if any**

35. It is submitted that the combination will have no adverse effect in the corn seeds business whatsoever and, therefore, the question of whether efficiencies would outweigh any potential AAEC should not even arise. Additionally, the Proposed Transaction, will result in cost efficiencies for both DuPont and DAS India, as it will be able to avail of significant synergies and cost savings.

**MATERIAL SCIENCE**

36. The activities of the Parties overlap in high pressure ethylene derivatives (HiPED) category. Within the HiPED category, the Parties have limited overlaps i.e., in acid copolymers, acrylate copolymers and MAH grafted polymers.

(i) ***Market share in the relevant market of the persons or enterprise in a combination, individually and as a combination***

37. ***HiPED***: The Parties' activities in the relevant market for all HiPED are largely complementary, with limited overlaps between their product offerings. Following the Proposed Transaction, worldwide, the merged entity will continue to face fierce competition from a wide range of established competitors. In particular, in the worldwide market, the merged entity will continue to face effective competition from a wide range of significant competitors, with shares similar to, or larger than that of the combined entity. In particular, ExxonMobil, LyondellBasell and Sinopec would exert significant competitive pressure on the combined entity. In addition to these large players, there are other companies in this segment who would continue to impose competitive constraints on the behavior of the Parties. Further, the Parties consider that their combined share in India in the relevant market for all HiPED products is not materially different from the global share (Combined - 5-10% (increment 0-5%) Volume).

38. ***Acid Co-polymers***: On a global basis, the Proposed Transaction would not give rise to competitive concerns as the combined entity would continue to face competition from well-established competitors. Major competitors in India include, ExxonMobil, Arkema, Ineos, Basell, Mitsui etc. Parties' Acid Copolymers shares – India (internal estimates) – (Combined – 60-65% (increment 0-5%) Value; 55-60% (increment 0-5%) Volume). Further, with the increase competition offered by the entry of Ineos, it is estimated that the combined share of the Parties is likely to reduce further. Furthermore, the combined entity would be faced with strong customers that have purchasing power inter alia because they typically buy a multitude of products from the parties. As mentioned above, the Parties believe that that the relevant market for all HiPED is worldwide. The same applies in the sub-segment for Acid-Co-polymers. However, it should also be noted that Dow is a marginal player in India and resulting in a negligible increase of the combined entity's share.

39. ***Acrylate Co-polymers***: In India, the Proposed Transaction will pose no competitive harm. It is evident that this sub-segment is dominated in India by Repsol and Basell, with DuPont and Dow being small players. The combined entity's share is dwarfed by the individual shares of Basell and Repsol. Parties' Acrylate Copolymers shares – India (internal estimates) - (Combined – 10-15% (increment – 0-5%) Volume). *On a worldwide* basis, the Proposed Transaction would not give rise to competitive concerns in the sub-segment of Acrylate Co-Polymers, because Dow is a marginal player in this sub segment, and acrylate co-polymers face competition from a variety of other products in all of their applications. Globally, Dow's share is very small. Following the completion of the Proposed Transaction, at a worldwide level, the merged entity will continue to face strong competition from large players such as Westlake, ExxonMobil, Sumitomo Chemical,

Arkema, and Repsol, as well as smaller competitors including the Polyolefin Company, NUC Corporation (Japan), Versalis, LyondellBasell, Borealis, and Ineos. The Parties also understand that Arkema has recently expanded its acrylate co-polymers capacity and may, therefore, be an even larger competitor in future.

40. It is submitted that the incremental gain by value or by volume is not significant at all, especially given the fact that this sub-segment is characterized by a large number of strong(er) competitors. Therefore, the Proposed Transaction is not likely to have any adverse effect on competition in this segment. Since there will be a larger competitor that will continue to participate in the market both in India and on a worldwide basis, the Proposed Transaction is unlikely to cause an AAEC.
41. **MAH grafted polymers:** In India, the MAH grafted polymers sub-segment is relatively crowded (i.e., SK Polymer, Arkema, Mitsui, Borealis, Polyram, Basell, Yparex, Mitsubishi, Chemtura etc.) and has witnessed several new entrants as well as increase in sales from several suppliers based in China. Parties' MAH grafted polymers shares – India (internal estimates) - (Combined – 35-40% (increment –15-20%) Value; 35-40% (increment – 15-20%) Volume). MAH grafted polymers may be further sub-segmented as MAH grafted polyethylene (Low graft, Market share – (Combined – 30-35% by Value; 35-40% by Volume); increment – 10-15% by Value and Volume) and MAH grafted polyethylene (High graft, Market share – (Combined – 10-15% by Volume; 15-20% by Value); increment – 0-5% by Value and Volume). The Parties do not consider that these individual business areas represent clearly-defined “markets” for the purposes of antitrust analysis.
42. On a global basis, the Proposed Transaction would not give rise to competitive concerns as the increase in the share of the combined entity in this segment is small, reflecting that Dow is a small competitor in this space. Further, the combined entity would continue to face strong competition from both established players as well as from new entrants in this sub-segment. Significant in-kind competition would continue to constrain the merged entity. In particular, large, well-established competitors are active in this field including the following: Mitsui<sup>3</sup>, LyondellBasell<sup>4</sup>, Arkema<sup>5</sup>, ExxonMobil<sup>6</sup> and Polyram.
43. Inter-material competition would also constrain the merged entity after the Proposed Transaction. Grafted polymers are principally used as tie layers in multi-layer packaging, in both flexible and rigid packaging, durable applications such as automotive gas tanks, multilayer composite pipes, flame retardant cables, building panel tie layers, and nylon polymer modification. In many (if not all) of these applications, MAH grafted polymers compete with other (non-MAH) grafted co-polymers as well as other materials such as ethylene acrylates, acid ter-polymers, and acid co-polymers.
44. Further, the existence of numerous competitors, after the Proposed Transaction, will serve to constrain the ability of the combined entity to significantly and sustainably increase prices. Therefore, even if shares in India are to be considered, the Proposed Transaction does not give rise to competitive concerns.

(ii) ***Likelihood that the combination would result in the removal of a vigorous and effective competitor or competitors in the market***

45. As mentioned above, the Parties' activities in the segments noted above are largely complementary. As is visible from the shares of sales in India, Dow is a marginal player in the sub-segments for Acid Co-polymers and Acrylate Co-polymers and there are sufficient players in these segments which will continue to provide effective competition.
46. Moreover, the products in which the Parties overlap have witnessed new entrants and face potential entry demonstrating that they are conducive to new entry. Several players in the sub-segment where the activities of the Parties overlap, are well established and have seen increase in sales year-on-year. Further, several new entrants, in particular players situated in China, have priced their products lower than that of the Parties allowing for higher volumes of sales. Therefore, the Proposed Transaction would not result in the removal of either a vigorous and effective competitor or of competitors in the market.

(iii) ***Actual and potential level of competition in the market; and Extent of effective competition likely to sustain in a market***

47. ***HiPED:*** Post the completion of the Proposed Transaction, the merged entity would continue to face effective competition from a wide range of competitors, with shares similar to, or larger than, those of the combined entity.
48. ***Acrylate Co-polymers:*** Post the Proposed Transaction, at a worldwide level, the merged entity will continue to face strong competition from large players such as Westlake, ExxonMobil, Sumitomo Chemical, Arkema, and Repsol, as well as smaller competitors including The Polyolefin Company, NUC Corporation (Japan), Versalis, LyondellBasell, Borealis, and Ineos. The Parties understand that Arkema has recently expanded its acrylate co-polymers capacity and may therefore be an even larger competitor in future. Further, from an Indian perspective, large competitors such as Repsol and Basell will continue to provide stiff competition to the combined entity.
49. ***Acid Co-polymers:*** From an Indian perspective, the combined entity will continue to face strong competition from ExxonMobil. Further, in this particular segment, even though DuPont has strong presence in India, Dow has miniscule presence. On a worldwide level, the Parties will continue to face effective competition from well-resourced competitors, including ExxonMobil, Ineos, Japan Polyethylene, as well as smaller competitors including LyondellBasell and Arkema. To the best of the Parties' knowledge, at least ExxonMobil and Ineos have sufficient unused capacity to expand production and would do so if acid co-polymer prices/profitability increased and/or prices/profitability of certain other products decreased. In these circumstances, the Parties submit that the Proposed Transaction will not, nor is likely to cause an AAEC in India.
- MAH grafted polymers:***
50. In India, the MAH grafted polymers segment is relatively crowded with a large number of players with substantial shares such as, SK Polymer, Arkema, K Polychem, Mitusi, Borealis, etc. Further, this segment has witnessed new entrants such as Pluss Polymers as well as several suppliers

based out of China who have increased their sales. On a worldwide basis, the Parties will continue to face strong competition from both established players (such as Mitsui, LyondellBasell, Arkema) as well as from other players (such as ExxonMobil, Polyram, etc.). Therefore, even if shares in India are to be considered, the Proposed Transaction does not give rise to any competitive concerns.

**(iv) *Likelihood that the combination would result in the parties to the combination being able to significantly and sustainably increase prices or profit margins***

51. As explained in detail above, after the Proposed Transaction the merging parties will continue to face fierce competition from a number of competing suppliers and strong and sophisticated customers with substantial purchasing power. The presence of strong competing suppliers and strong customers will effectively constrain the merging parties after the Proposed Transaction who, as a consequence, would not be able to significantly and sustainably increase prices or profit margins.

**(v) *Nature and extent of innovation***

52. The Parties submit that, as a general matter, R&D is not an important factor in these segments. The basic R&D is already undertaken and the possible chemistries are well-known and production technologies are well established. The Parties further submit that there have not been any significant recent technological developments or innovations. Further, the focus of the players in this segment is on providing technical service and application extension support to respective customers. Additionally, given the fact that the Parties do not undertake any R&D activities in India, the Proposed Transaction is not likely to impact the existing competitive scenario.

**(vi) *Extent of barriers to entry into the market***

53. The relevant market (i.e., all HiPED products) in which the activities of the Parties overlap have witnessed new entrants and face potential entry demonstrating that the market is conducive to new entry. Several players in the market are well established and have seen increase in sales year-on-year yet, new entrants, in particular players situated in China, have priced their products lower than that of the Parties allowing for higher volumes. Furthermore, the Parties understand that their competitors use the same reactor to produce different types of HiPEDs. For example, Arkema makes different types of acrylate co-polymers on the same reactor. Similarly the Parties understand that Ineos makes at least LDPE and other acid co-polymers on the same reactor. This clearly suggests that suppliers could or even do switch production between these products.

**(vii) *Level of combination in the market***

54. There are at least 4-6 established global players including in India (as noted above) active across the products defined in this chapter, who service demand from facilities situated across the globe, with additional competitors active in at least one of the product areas (and often more). Further,

the relevant market for all HiPED products and its sub-segments have witnessed the entry of new players as well as anticipate entry of more.

**(viii) Degree of countervailing power in the market**

55. There are large and powerful buyers of HiPED. These customers have strong bargaining power, and often multi-source their relevant products. Customers can easily switch to other suppliers without significant switching costs. The large buyers have a proven capacity to encourage and effectively sponsor entry and to constrain suppliers effectively. Additionally, these buyers typically source a broad range of products from suppliers and accordingly leverage their purchasing power across product groups. Given the existence of strong countervailing power, the Parties believe that the combined entity will not be able to alter the competitive market dynamics in its favour.

**(ix) Extent to which substitutes are available or are likely to be available in the market**

56. As stated previously, a market defined as HiPED is somewhat narrow as it fails to take account of competition from materials that technically fall outside of that classification but which exercise a competitive constraint on HiPED, such as, for example, LLDPE, mLLDPE (including blends), plastomers, primers, polyurethane, acrylic adhesives, and others. Therefore these products could be considered as substitutes.

**(x) Whether the benefits of the combination outweigh the adverse impact of the combination, if any**

57. In conclusion, the Proposed Transaction neither causes nor is likely to cause an AAEC in India. Therefore, the question of the benefits of the combination outweighing its adverse impact does not arise.

**PURIFIED CMC**

The Parties only compete in the segment of purified carboxymethylcellulose (**CMC**).

**(i) Market share in the relevant market of the persons or enterprise in a combination, individually and as a combination**

58. The Parties combined share in purified CMC would be minor globally (Combined 5-10%; Increment 0-5%; Value). The Parties face stiff global competition on account of the fact that the products are easily transported. Further, CP Kelco, Ashland and AkzoNobel together, account for almost half of global production of purified CMC, and there are many other regional producers, all of whom sell their products worldwide today or could do so easily. Therefore, the Proposed Transaction is not likely to have an adverse effect on competition.

**(ii) Likelihood that the combination would result in the removal of a vigorous and effective competitor or competitors in the market**

59. DuPont and Dow are small players in relation to purified CMC. Given that several players both established such as CP Kelco as well as newer players from China who have excess capacity

on account of recent expansions, the Proposed Transaction will not result in the removal of a vigorous and effective competitor from the market.

**(iii) *Actual and potential level of competition in the market; and Extent of effective competition likely to sustain in a market***

60. The segments for purified CMC have several players both established (including, Reliance Cellulose Products Limited, and a number of Chinese players, including companies such as Chongquin Lihong Fine Chemicals Co. Ltd., Wealthy Chemical Industry (Suzhou) Co. Ltd, Shanghai Shenguang Edible Chemicals Co. Ltd, Guangzhou Jinzhujiang Chemical Co Ltd., Sanli Puyang Zhongyuan Sanli Industry Co. Ltd., and Yixing Tongda Chemical Co Ltd, who supply into India) as well as newer players from China who have excess capacity on account of recent expansions. There is vigorous competition both in terms of product quality and price. Therefore, post the Proposed Transaction the market will continue to remain vibrant.

**(iv) *Likelihood that the combination would result in the parties to the combination being able to significantly and sustainably increase prices or profit margins***

61. As stated above, the segments for purified CMC have several players both established as well as newer players from China who have excess capacity on account of recent expansions. It is pertinent to note that there is limited product differentiation, ease in switching and vigorous competition in terms of price. Therefore, the post the Proposed Transaction, the combined entity with small combined market share is not likely to be able to profitably increase prices and profit margins. Further, any attempt to increase price is most likely to lead to loss of volumes.

**(v) *Nature and extent of innovation***

62. R&D plays a limited role given the homogeneity of the products. The Parties understand that IPRs are not a significant restriction on entry. Product portfolios are very similar between players with comparable specification ranges (viscosity, purity, moisture content, etc.) As such, the products are not highly differentiated and innovation is not likely to affect the segments significantly.

**(vi) *Extent of barriers to entry into the market***

63. The entry of several Chinese suppliers demonstrates that barriers to entry are low.

**(vii) *Level of combination in the market***

64. The Parties combined share will be small globally and in India. The Parties face stiff global competition on account of the fact that the products are easily transported. CP Kelco, Ashland and AkzoNobel together, account for almost half of global production of purified CMC, and there are many other regional producers, all of whom sell their products worldwide today or could do so easily. The Parties consider that their combined share in India is unlikely to be materially

different than their global share (as noted above), in any event the Parties' share in India would also be very small.

**(viii) Degree of countervailing power in the market**

65. Product portfolios are very similar between players with comparable specification ranges (viscosity, purity, moisture content, etc.) Therefore, customer switching is not difficult.

**(ix) Extent to which substitutes are available or are likely to be available in the market**

66. CMC (both purified and semi-purified) is generally viewed as a commoditized product. As mentioned above, there are a number of significant competitors for this product. Purified CMC customers generally source from multiple suppliers and switching between purified CMC suppliers is quick and inexpensive due to the overall homogeneity (commodity-nature) of purified CMC. In addition, there is considerable excess purified CMC capacity globally, due mostly to recent expansion in China. As such, substitutes remain available.

**(x) Whether the benefits of the combination outweigh the adverse impact of the combination, if any**

67. As a general matter, the Parties submit that the Proposed Transaction, will result in benefits such as cost efficiencies and synergies at a global level, including India. Further, given the low market shares of the Parties and intense competition, the Proposed Transaction will have no adverse effect whatsoever and, therefore, the question of whether efficiencies would outweigh any potential AAEC does not arise.

**EXPECTED TIMEFRAME FOR COMPLETION OF VARIOUS STAGES OF THE COMBINATION**

68. The Parties expect to close the Proposed Transaction in the first half of 2017.

**INVITING COMMENTS ON THE PROPOSED TRANSACTION**

- III. In order to determine whether the combination has or is likely to have an appreciable adverse effect on competition in the relevant market in India, the Commission invites comments/objections/ suggestions in writing, from any person(s) adversely affected or likely to be affected by the combination, to submit in writing, as provided under sub-section (3) of section 29 of the Act, to be addressed to the **Secretary, Competition Commission of India, the Hindustan Times House, 7th Floor, 18-20, Kasturba Gandhi Marg, New Delhi-110001, email: secy@cci.gov.in within fifteen working days from the date of this publication.**

- IV. The comments/objections/suggestions shall state:
- (a) name, address and contact details (including, email id, telephone number, title/designation) of the person(s) writing to the Commission; and

- (b) with supporting documents, how such a person(s) is adversely affected or is likely to be affected by the combination, keeping in view the relevant provisions of the Act/ factors provided under sub-section (4) of Section 20 of the Act.

The Commission is not likely to consider unsubstantiated objections.

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- <sup>1</sup> This market includes the following products: low density polyethylene (LDPE); ethyl vinyl acetate (EVA); acrylate co-polymers; acid co-polymers; ethylene carbon monoxide inter-polymers (ECO); ionomers; MAH grafted polymers; and compounded/formulated solutions with easy opening/resealing functionality.
- <sup>2</sup> *Standard Chartered Bank/Barclays Bank* (C-2011/12/15), at paragraph 12; *Aica Kogyo Company Limited/ Aica Laminates India Private limited/ Bombay Trading Corporation Limited* (C-2011/09/04), at paragraph 11; *Nippon Steel/ Sumitomo Metal* (C-2011/10/07), at paragraphs 17 and 19; *SML Isuzu/ Isuzu Motors/ Sumitomo* (C-2011/12/17), at paragraph 15.
- <sup>3</sup> Mitsui is active with the Admer brand (MAH grafted PE, MAH grafted polyethylene and blends, and MAH grafted polypropylene).
- <sup>4</sup> LyondellBasell is active with brands Lucalen (MAH grafted PE) and Plexar (MAH grafted polyethylene and blends, and MAH grafted EVA).
- <sup>5</sup> Arkema is active with brands Orevac (MAH grafted PE, MAH grafted polypropylene, and MAH grafted EVA) and Bestpeel (MAH grafted polyethylene and blends).
- <sup>6</sup> ExxonMobil is active with brands Exxelor PE (MAH grafted PE), Exxelor PO (MAH grafted polypropylene), and Exxelor VA (MAH grafted EVA).