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PUBLIC VERSION

In the published version of this decision, some information has been omitted pursuant to Article 17(2) of Council Regulation (EC) No 139/2004 concerning non-disclosure of business secrets and other confidential information. The omissions are shown thus […]. Where possible the information omitted has been replaced by ranges of figures or a general description.

DIC Corporation
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Japan

Subject: **Case M.9677 — DIC/BASF Colors & Effects**
Commission decision pursuant to Article 6(1)(b) in conjunction with Article 6(2) of Council Regulation No 139/2004[1] and Article 57 of the Agreement on the European Economic Area[2]

Dear Madam or Sir,

(1) On 16.10.2020, the European Commission received notification of a proposed concentration pursuant to Article 4 of the Merger Regulation by which the DIC Corporation (together with the entities it directly or indirectly controls referred to as "DIC") acquires within the meaning of Article 3(1)(b) of the Merger Regulation sole control of the whole of BASF SE's ("BASF", Germany) BASF Colors & Effects (together with the entities it directly or indirectly controls referred to as "BCE"), ("the Transaction").[3] DIC is designated hereinafter as the "Notifying Party" and, together with BCE, as the "Parties".

1 OJ L 24, 29.1.2004, p. 1 (the 'Merger Regulation'). With effect from 1 December 2009, the Treaty on the Functioning of the European Union ('TFEU') has introduced certain changes, such as the replacement of 'Community' by 'Union' and 'common market' by 'internal market'. The terminology of the TFEU will be used throughout this decision.

2 OJ L 1, 3.1.1994, p. 3 (the 'EEA Agreement').

3 Publication in the Official Journal of the European Union No C 358, 26.10.2020, p. 10.

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1. THE PARTIES

(2) DIC is a publicly listed company headquartered in Japan, active in the production and sale of printing inks, organic pigments and synthetic resins. As regards pigments and other colourants, DIC is mainly active through its wholly-owned subsidiary SunChemical Corporation ("SunChemical", US).

(3) BCE's business includes the manufacture and sale of pigments and other colourants. BASF is a publicly listed international chemical and industrial company headquartered in Ludwigshafen am Rhein, Germany. BCE represented less than [small percentage] of BASF's worldwide turnover in 2018.

2. THE OPERATION

(4) In August 2019, DIC Corporation and BASF concluded a Sale and purchase Agreement setting out the terms of the Transaction, by which DIC will acquire the entirety of the shares of 19 individual entities as well as certain assets, jointly constituting BCE, from BASF. Following completion of the Transaction, DIC will thus acquire sole control of BCE. The Transaction is therefore a concentration within the meaning of Article 3(1)(b) of the EU Merger Regulation.

3. UNION DIMENSION

(5) The undertakings concerned have a combined aggregate world-wide turnover of more than EUR 5 000 million (DIC: EUR [...], BCE: EUR [...]).[4] Each of them has an EU-wide turnover in excess of EUR 250 million (DIC: EUR [...], BCE: EUR [...]), but they do not achieve more than two-thirds of their aggregate EU-wide turnover within one and the same Member State. The notified operation therefore has an EU dimension.

4. THE PROCEDURE

(6) The Transaction was previously notified on 15.05.2020 and subsequently withdrawn on 23.06.2020. It was notified again on 16.10.2020.

(7) As a consequence, the Commission's market investigation was twofold, with one set of questionnaires sent on 15.05.2020, and an additional, more targeted, set of questionnaires sent on 16.10.2020. The Commission considers that both sets of questionnaires constitute informative and relevant information for the purpose of assessing the present Transaction. As a result, both sets of questionnaires will be referred to in the present Decision, and both will be referred to under the terms "the Commission's market investigation" or "the market investigation".

4 Turnover calculated in accordance with Article 5 of the Merger Regulation.

5. COMPETITIVE ASSESSMENT

5.1. Analytical framework

(8) Under Articles 2(2) and 2(3) of the Merger Regulation, the Commission must assess whether a proposed concentration would significantly impede effective competition in the internal market or in a substantial part of it, in particular through the creation or strengthening of a dominant position.

(9) A merger can entail horizontal effects. In this respect, the Commission Guidelines on the assessment of horizontal mergers under the Merger Regulation ("the Horizontal Merger Guidelines")[5] distinguish between two main ways in which mergers between actual or potential competitors on the same relevant market may significantly impede effective competition, namely (a) by eliminating important competitive constraints on one or more firms, which consequently would have increased market power, without resorting to coordinated behaviour (non-coordinated effects); and (b) by changing the nature of competition in such a way that firms that previously were not coordinating their behaviour are now significantly more likely to coordinate and raise prices or otherwise harm effective competition. A merger may also make coordination easier, more stable or more effective for firms which were coordinating prior to the merger (coordinated effects).[6]

(10) In addition, a merger can also entail vertical effects when it involves companies operating at different levels of the same supply chain. Pursuant to the Commission Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings (the "Non-Horizontal Merger Guidelines"),[7] vertical mergers do not entail the loss of direct competition between merging firms in the same relevant market and provide scope for efficiencies. However, there are circumstances in which vertical mergers may significantly impede effective competition. This is in particular the case if they give rise to foreclosure.[8] The Non-Horizontal Merger Guidelines distinguish between two forms of foreclosure: input foreclosure, where the merger is likely to raise costs of downstream rivals by restricting their access to an important input, and customer foreclosure, where the merger is likely to foreclose upstream rivals by restricting their access to a sufficiently large customer base.[9]

5.2. Overview of affected markets

(11) The Transaction combines the activities of two global suppliers of (primarily organic) pigments. The focus of the Transaction is on combining the parties' capabilities in the supply of certain types of pigments. Pigments are compounds that provide colour to a given material either by covering its surface (paints, coatings, printing inks) or by mixing with it (plastic applications). Pigments are distinct from dyes, which engage in chemical reactions with the material they are supposed to colour.

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5 Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, OJ C 31, 5.2.2004 p.5.

6 Horizontal Merger Guidelines, paragraph 22.

7 OJ C 265, 18.10.2008, p. 6.

8 Non-Horizontal Merger Guidelines, para 18.

9 Non-Horizontal Merger Guidelines, para 30.

(12) The Transaction creates horizontally affected markets in the sale of nine chemical classes of organic pigments,[10] and one chemical class among inorganic pigments, as laid out in Table 1 below. An overview of the Parties' combined market shares at chemical class level for these chemical classes is provided in Table 2 below.

Table 1: chemical classes impacted by the Transaction

Organic pigments	Inorganic pigments
Perylene Quinacridone Phthalocyanine Diketopyrrolopyrrole ("DPP") Azo condensation Isoindoline Quinophthalone Isoindolinone Pyrazoloquinazolone	Bismuth vanadate

Table 2: Overview of the Parties' market shares for perylenes, quinacridones, phthalocyanines, DPP, azo condensation, isoindoline, quinophthalone, isoindolinone, pyrazoloquinazolone, and bismuth vanadate pigments (in 2019, by volume)

Chemical class	Worldwide market shares			EEA supply shares		
	DIC	BCE	Combined	DIC	BCE	Combined
Perylenes	[10-20]%	[20-30]%	[40-50] %	[0-5]%	[30-40]%	[40-50] %
Quinacridones	[10-20]%	[10-20]%	[20-30]%	[5-10]%	[5-10]%	[10-20]%
Phthalocyanines	[5-10]%	[5-10]%	[10-20]%	[10-20]%	[10-20]%	[20-30]%
DPP*[11]	[0-5]%	[20-30]%	[20-30]%	[0-5]%	[20-30]%	[20-30]%
Azo condensation*	[0-5]%	[20-30]%	[20-30]%	[0-5]%	[30-40]%	[30-40]%
Isoindoline	[0-5]%	[20-30]%	[20-30]%	[0-5]%	[20-30]%	[20-30]%
Quinophthalone*	[0-5]%	[30-40]%	[30-40]%	[0-5]%	[40-50] %	[40-50] %
Isoindolinone*	[0-5]%	[30-40]%	[30-40]%	[0-5]%	[30-40]%	[30-40]%
Pyrazoloquinazolone*	[0-5]%	[30-40]%	[30-40]%	[0-5]%	[30-40]%	[30-40]%
Bismuth vanadate°[12]	[0-5]%	[20-30]%	[20-30]%	[0-5]%	[20-30]%	[20-30]%

Source: The Parties' sales and RBB competitors' sales and market size estimates.

(13) The Transaction also gives rise to one vertically affected relationship[13], namely concerning the supply of pigments (upstream) and the manufacture of printing inks

10 Organic pigments are pigments that are classified as organic compounds, that is to say compounds that contain carbon atoms in covalent bonding (i.e. carbon-carbon bonds). Inorganic pigments are pigments that are classified as inorganic compounds, that is to say all chemical compounds to the exception of organic ones.

11 Products market with a * are [...].

12 Products market with a ° are [...].

13 There are two further possible product markets downstream of pigments, that could be considered as giving rise to vertical links, namely preparations and masterbatches. Preparations are products that combine pigments with a solid or liquid substrate that carries the pigment. Masterbatches are products for the colouring of plastic materials in which pigments and additives are dispersed at high concentration in a carrier material. Both preparations and masterbatches involve few additional and not

(downstream). This relationship is affected within the meaning of EU merger control[14] because upstream the Parties' market shares would exceed 30% in the sales of certain pigment chemistries which are used to produce printing inks. Moreover, the relationship is also affected because DIC's market share for the manufacture of printing inks downstream exceeds 30% in one potential sub-segment, namely the manufacture of gravure liquid inks in the EEA.

5.3. Market definitions

5.3.1. Pigments

(14) As explained above, a distinction can be drawn between organic pigments, whose chemical formula contain carbon atoms in covalent bonding, and inorganic pigments. Aside from these, effect pigments can be considered as forming a category of their own, in the sense that their main function is not to provide a given colour, but rather an effect (such as a metallic or a pearlescent effect).

(15) As shown above in Table 1, the main overlaps between the Parties' activities relate to organic pigments. There are around 20 chemical classes of organic pigments, covering a range of colour shades. Each chemical class of pigments requires a different manufacturing process and often requires dedicated equipment. Within a chemical class, there are typically several different pigments, with different chemical composition, providing different colours and shades. For instance, the perylene class

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complex processing steps from pigments. In addition, both activities are performed by both Parties as an ancillary complement to their pigment activities, in particular when end-customer require that additional finishing/dispersion steps are performed on the pigments which are manufactured by the Parties, in order for them to be able to use them more readily. Therefore, for the purposes of the present case, the Commission considers that the competitive dynamics of the pigment markets determine to a very large extent the competitive dynamics for preparations and masterbatches. As regards preparations in particular, the Notifying Party provided for each chemical class market shares for a hypothetical market encompassing all pigments sold in dry form as well as in mono-pigment preparations. These figures do not differ materially for any chemical class compared to the figures for pigments per chemical class alone.

14 An affected market consist of all relevant product and geographic markets, as well as plausible alternative relevant product and geographic markets, if in the EEA territory (a) two or more of the parties to the concentration are engaged in business activities in the same relevant market ("horizontal relationships") and where the concentration will lead to a combined market share of 20% or more; or (b) one or more of the parties to the concentration are engaged in business activities in a relevant market, which is upstream or downstream of a relevant market in which any other party to the concentration is engaged (vertical relationships), and any of their individual or combined market shares at either level is 30% or more, regardless of whether there is or is not any existing supplier/customer relationship between the parties to the concentration. (See Section 6.3, Annex 1, Commission Regulation (EC) No 802/2004 of 21 April 2004 implementing the Merger Regulation). The Commission may presume that concentrations where the market share of the undertakings concerned does not exceed 25% either in the common market or in a substantial part of it are not liable to impede effective competition and are compatible with the common market. (See recital 32 of the Merger Regulation and paragraph 18 of the Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings (OJ C 31, 5.2.2004, p. 5). The Commission is unlikely to find concerns in non-horizontal mergers, be it of a coordinated or of a non-coordinated nature, where the market share post-merger of the new entity in each of the markets concerned is below 30% and the post-merger HHI is below 2 000. Where a merged entity would have a market share just above the 30% threshold on one market but substantially below on other, related, markets competition concerns will be less likely. (See paragraph 25 of the Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings (OJ C 265, 18.10.2008, p. 6).

contains red, maroon, violet and black pigments. These individual pigments are usually referred to using their so-called colour index (for instance Pigment Red 179 – abbreviated PR179 – refers to a specific red shade within perylene pigments). However, some chemical classes, such as quinophthalone, only contain one colour index. Pigments can be mixed together (irrespective of their chemical class) to obtain even more colours.

5.3.1.1. Product market definition

Commission's precedents

(16) In *Clariant/Hoechst*,[15] the Commission considered organic and inorganic pigments as distinct product markets. In *BASF/CIBA*,[16] the Commission considered a further potential sub-segmentation of organic and inorganic pigments by chemical class, and considered a potential further sub-segmentation into the following categories of pigment applications: (i) coatings, (ii) plastics and (iii) others, with the coatings category potentially split further into: (i) automotive, (ii) industrial and (iii) decorative coatings, ultimately leaving both questions open.

(17) As regards pigments other than organic pigments, in *BASF/CIBA*,[17] the Commission treated bismuth vanadate and pearlescent effect pigments as separate chemical classes, and the potential segmentations by application described in paragraph (15) were also applied to them.

(18) In more recent pigment-related cases (*Huntsman/Equity Interests*[18] and *Tronox/Cristal*[19]), the Commission suggested further sub-segmentations of each of the three categories of pigment applications (coatings, plastics and others). More particularly, with respect to TiO2,[20] the Commission also considered potential segmentation by crystalline form (rutile vs anatase), as well as production process (sulphate-based vs chloride-based). However, both these cases analysed the market for TiO2, which is a white inorganic pigment, and which significantly differs from the broader range of primarily organic pigments being combined as a result of the Transaction in present case.

The Notifying Party's view

(19) The Notifying Party submits that the appropriate market definition is by *colour* space, and that all red pigments, all blue pigments and all yellow pigments form three distinct relevant product markets. The Notifying Party considers that pigments within these classes exhibit similar properties, and can be substituted without changing the final product's features.[21]

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15 See Case IV/M.911, *Clariant/Hoechst*, decision of 10 June 1997.

16 See Case COMP/M.5355, *BASF/CIBA*, decision of 12 March 2009.

17 See Case COMP/M.5355, *BASF/CIBA*, decision of 12 March 2009.

18 See Case M.7061, *Huntsman Corporation/Equity Interests held by Rockwood Holdings*, decision of 10 September 2014.

19 See M.8451, *Tronox/Cristal*, decision of 4 July 2018.

20 See M.8451, *Tronox/Cristal*, decision of 4 July 2018.

21 Form CO, paragraphs 230, as well as 232-239.

(20) **First**, the Notifying Party argues that it is colour rather than the chemical composition of the pigment that is most important to customers, and that, with this respect, manufacturers can rely on different chemistries to meet the customers' colour and property requirements.[22] The Notifying Party submits that the chemical classes can be categorised in colour spaces as indicated in Table 3 below and that the pigments categorised to each colour space have similar physical properties.

(21) **Second**, the Notifying Party stresses that switching pigments/formulation while conserving the final product's precise colour and characteristics has become increasingly easy thanks to the recent improvements of colour matching software.[23]

(22) **Third**, the Notifying Party exhibits several examples of colour points that can be attained through different alternative formulations, using pigments from different chemical classes, as well as a few examples of products (in automotive coating or consumer goods) for which the precise colour can be matched exactly using alternative pigments formulations, all approved by their owner company (for example the automotive manufacturer who sells the vehicle).[24] The Notifying Party also provides some examples of customers of the Parties switching between pigments belonging to different chemistries for the same application/need.[25]

(23) With respect to the possibility of finding alternatives in different chemical class for a given pigment, the Notifying Party provides the specific example of lead chromate pigments, a class of yellow pigments that was progressively removed from the market from 2010 onwards, due to its toxicity. The Notifying Party explains that several alternatives/substitutes/replacement solutions for lead chromate pigments, based on different chemistries. While presenting these elements, the Notifying Party however acknowledges that finding alternatives for lead chromates had been difficult and technically challenging due to these products' high quality and cost-effectiveness.[26]

(24) **Fourth**, the Notifying Party further explains that pigment finder tools on pigment manufacturer's websites usually allow customers to filter the searches by colour and applications, but not by chemical class. The Notifying Party submits that these tools are designed to reflect the customer's expectations and criteria.[27]

(25) **Fifth**, in relation to a potential sub-segmentation of each chemical class by colour index (see above paragraph (14)), the Notifying Party argues that there is enough supply-side substitution, within each chemical class, between different colour indices, for them to be considered as forming part of the same product market, and that, despite requiring extensive washing of the production pipes, switching between colour indices is feasible, [...].[28]

(26) **Finally**, with respect to potential substitution across applications, the Notifying Party considers that pigments within each chemical class exhibit similar properties that make them suitable for use across applications, and that they are priced [...] across

22 Form CO, paragraphs 207-208.
23 Form CO, paragraphs 240-305.
24 Form CO, paragraphs 213-216 and 223-224.
25 Form CO, paragraph 231.
26 Form CO, paragraphs 225-228.
27 Form CO, paragraphs 217-222.
28 Form CO, paragraphs 306-337.

applications. The Notifying Party also explains that all the pigments sold by the Parties, irrespective of their chemical class, are marketed as suitable for all applications, [...].[29]

(27) The Notifying Party categorise the pigments' chemical classes into three colour spaces as follows (underlined products are affected when considered at the level of the chemical class, as illustrated in Table 3):

Table 3: chemical classes per colour space

Red colour space	Blue colour space	Yellow colour space
Perylene Quinacridone Diketopyrrolopyrrole ("DPP") Azo condensation Anthraquinone	Phthalocyanine Indanthrone	Metal complex Bismuth vanadate Isoindoline Isoindolinone Quinophthalone Pyrazoloquinazolone Benzimidazolone

The Commission's assessment

(28) The Commission's market investigation evidences that the relevant product market definition for organic pigments is narrower than colour space, which is the product market definition submitted by the Notifying Party.

(29) Most notably, market investigation feedback strongly indicates that both colour as well as other technical properties are of high importance when selecting pigments. Technical properties besides colour include, amongst others, tinting strength, opacity/transparency, dispersability, weather fastness, particle size distribution, and others.[30] Several customers also indicate that for example for perylenes, no other chemical class can match perylene characteristics such as light fastness, weather fastness and transparency.[31]

(30) Concerning switching between chemical classes, for all the pigments investigated in the market investigation, a large share of customers indicate that in case of a small but significant and non-transitory increase in price ("SSNIP") they would not be able to substitute the concerned pigment with a pigment of another chemical class. Within the customers stating they could substitute, the majority indicate they could only do so for future formulations, not for existing formulations.[32] In the context of this result, it is important to emphasise that for some applications, formulations need to be kept constant and available for a significant amount of time. For example in automotive refinishing applications, formulations need to closely match the original colour of the car and remain available for many years. This is also reflected in customer responses to the market investigation, which often indicate supplier stability and supply security

29 Form CO, paragraphs 338-357.

30 Non-confidential minutes of call with a pigments competitor dated 6 April 2020.

31 Responses to question 20.2 of *Q1 – Questionnaire to pigments customers.*

32 Responses to questions 10, 42, 74, 106 of *Q1 – Questionnaire to pigments customers.*

as important criteria.[33] Therefore, in case of a SSNIP, only a small minority of customers would be able to substitute a pigment of another chemical class in a short period of time.

(31) Moreover, the majority of customers indicated that within chemical classes they cannot easily switch between pigment products within the same colour index, with the majority claiming that it is either not possible or possible only for some applications, and indicating that testing and requalification would be required.[34] Some customers point out, that different products, even within the same colour index, can have different qualities and characteristics.[35] One customer points out that generally, "*the more demanding the application, the harder it is to switch / qualify a new supplier*" for a given colour index.[36]

(32) A majority of customers indicate they have used colour-matching software in the past five years. While many indicate that it can be helpful when selecting pigments or even replacing a pigment in an existing formulation, some say it is just a start as it only matches the colour. Significant qualification and testing processes may therefore still be required to confirm whether other technical specifications are met.[37] One pigment competitor specifically mentioned that colour matching is not particularly relevant for high-performance pigments.[38]

(33) The same argument applies to pigment finder tools on supplier websites. While these may give a general indication of colour and performance characteristics, it is not conclusive on whether a pigment meets a customer's needs – particularly for demanding applications.

(34) In summary, the market investigation provides evidence that there is only very limited *demand-side* substitutability between chemical classes, and even between different products within a colour index. In situations where substitution is possible, it is often a time-consuming and costly process.[39]

(35) *On the supply side*, there appears to be very limited substitutability between chemical classes and even between colour indices within a chemical class. A competitor indicates that each chemical class has dedicated production lines. As different process steps are involved for each chemical class, switching will entail significant delays and investments and so it is not typically possible within the short period of time required to consider them to belong to the same relevant market from a supply side perspective.[40] [41]

(36) With regard to supply side substitutability between colour indices within a chemical class, the Notifying Party argues this is possible and [...] for certain colour indices within quinacridones and phthalocyanines. However, the results of the market

33 Responses to questions 30, 62, 94 of *Q1 – Questionnaire to pigments customers.*
34 Responses to questions 13, 45, 78, 110 of *Q1 – Questionnaire to pigments customers.*
35 Responses to questions 13, 45, 78, 110 of *Q1 – Questionnaire to pigments customers.*
36 Response to question 45 of *Q1 – Questionnaire to pigments customers.*
37 Responses to question 5, 5.1, 5.2, 5.3, 5.4 of *Q1 – Questionnaire to pigments customers.*
38 Non-confidential minutes of call with a pigments competitor dated 6 April 2020.
39 Responses to questions 35, 67, 99, 123, 147 of *Q1 – Questionnaire to pigments customers.*
40 Non-confidential minutes of call with a competitor dated 15 April 2020.
41 Note [...].

investigation gave clear indications that supply side substitutability is only possible for some chemical classes, and within these chemical classes for some colour indices only. For perylenes, all competitors indicate that switching production from one colour index to another within the chemical class costs considerable time and effort and constitutes a strategic decision.[42] When asked for an example of such a switch for perylenes, one competitor notes: "*I have not seen a switch in colour index as it does not make business sense.*"[43] For quinacridones and phthalocyanines, the vast majority of competitors indicate that switching production from one colour index to another within the chemical class costs considerable time and effort and constitutes a strategic decision.[44] With regard to quinacridones, a competitor states: *"Quinacridones are manufactured via two different technologies, namely Acidic ring closure (PPA route) and Thermal ring closure (Solvent route). We can switch CI [colour index] from one to another if the technology used to make the final CI is the same.*" As for phthalocyanines, a competitor explains that while it is possible to switch between blues (i.e. various types of blue), it is not possible to switch between a blue and a green.

(37) A product market definition by application, as has been considered in Commission precedents, appears to be less appropriate and to yield a less clear market definition than a product market definition by chemical composition.

(38) First, pigments can be used for multiple applications. While the more high performance chemical classes are typically used for more demanding applications, none of the chemical classes is only used for specific applications.[45] Within the chemical class, while some products are particularly suited to a specific application, individual products may also be suitable for multiple applications and are marketed as such.[46] In the market investigation, customers explained that they used all chemical classes in a variety of applications.[47] The majority of customers also agreed that some applications may use the same pigments.[48]

(39) Second, average price by application [...].[49]

(40) In summary, the Commission considers it likely that the specific application matters less than the specific customer's need in terms of product quality and characteristics (e.g. in terms of light fastness, weather fastness and other characteristics). While a correlation between specific applications (e.g. automotive) and specific product characteristics (e.g. light and weather fastness) can be observed, this does not mean that the market should necessarily be distinguished by application, rather than the characteristics of the pigment. Indeed, pigments are distinguishable by chemical class or even within class by narrower colour indices. Expensive and high performance chemical classes, such as perylenes, will typically be used for a variety of demanding

42 Responses to question 7 of *Q2 – Questionnaire to pigments competitors.*
43 Response to question 7 of *Q2 – Questionnaire to pigments competitors.*
44 Responses to question 26 and 45 of *Q2 – Questionnaire to pigments competitors.*
45 Form CO, paragraph 339.
46 Form CO, paragraph 341 and Figure 95.
47 Responses to questions 9, 41, 73, 105 of *Q1 – Questionnaire to pigments customers.*
48 Responses to questions 11.3, 43.3, 75.3, 107.3 of *Q1 – Questionnaire to pigments customers.*
49 Form CO, Figure 99-101.

applications. For the purposes of this decision, the Commission will therefore assess the markets […][*] the level of chemical class and colour index.

(41) In light of the above, the Commission considers that, for the purposes of the present decision, the appropriate definition of the relevant product market for pigments corresponds to at least the level of chemical class, and possibly to the narrower level of the colour index within each chemical class.

(42) However, even within colour indices, products differ in their characteristics and are not easy to substitute. Therefore, the Commission considers that certain segmentations within colour indices should be retained for the purposes of the competitive analysis, as there may be significant product differentiations.

(43) Ultimately, the question whether the product market definition is by chemical class or colour index can be left open for the purposes of the present decision, as it does not materially affect the Commission's assessment since serious doubts arise as to the compatibility of the Transaction with the internal market due to horizontal effects in perylene and quinacridone pigments under any plausible product market definition relating to colour index level and no serious doubts arise as to the compatibility of the Transaction with the internal market as a result of non-horizontal effects or horizontal effects in chemical classes of pigments other than perylene and quinacridone under any plausible product market definition relating to colour index level.

5.3.1.2. Geographic market definition

Commission's precedents

(44) The Commission has previously considered that the relevant geographic market for pigments is at least EEA-wide and possibly worldwide in scope.

(45) In case M.5355 – *BASF / CIBA*, the Commission's market investigation showed that customers in the EEA were supplied from plants outside the EEA for pigments such as perylenes, suggesting a worldwide market.[50] For some other pigments, such as bismuth vanadate, the Commission found that differences in regulation and prices suggested an EEA-wide market. Ultimately, the question was left open.

The Notifying Party's view

(46) The Notifying Party submits that the geographic scope of the pigment sector is global.[51]

(47) Firstly, the Notifying Party argues that the Parties and their competitors supply their customers globally from a limited number of production locations. For example, DIC produces perylene pigments [...] in its Bushy Park (South Carolina, US) plant, and sells it globally.[52]

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[*] Should read: "at"

50 See Case COMP/M.5355, BASF/CIBA, decision of 12 March 2009, paragraph 116.

51 Form CO, paragraph 358.

52 Form CO, paragraphs 359-364.

(48) Secondly, the Notifying Party submits that the pigment sector is characterised by significant global trade flows, particularly from China and India into the Western hemisphere.[53] By way of illustration, the Notifying Party indicates that the volume of pigments imported into the EEA correspond to [80-90]% of the total estimated demand in the EEA. Out of these volumes imported into the EEA, [80-90]% originates in Asia, with China representing [40-50]% and India representing [30-40]%.[54] Finally, the Parties stress that Chinese and Indian producers continue to expand production capacities and build distribution and warehousing facilities in the EEA to facilitate export and sales.[55]

(49) Finally, the Notifying Party argues that the pigments sector is not subject to significant transportation costs and not subject […]* significant regulatory barriers. As an indication, the Parties submit that transportation and related costs, such as packaging and freight, represent well below [small percentage] of total costs.[56] In terms of regulation, the Notifying Party indicates that pigments are subject to the EU-wide REACH regulation.[57] According to this regulation, manufacturers and importers of chemicals, including pigments, are obliged to register substances they produce and market. The Notifying Party considers that this does not form a barrier for non-EEA companies, evidenced by the significant amount of REACH registrations made by non-EU companies. The Notifying Party illustrates this further by supplying multiple examples of Chinese and Indian pigment suppliers showcasing their REACH compliance.[58]

The Commission's assessment

(50) The Commission's market investigation gave sufficient evidence to conclude that the market for pigments is global.

(51) First, the market investigation confirmed the Notifying Party's claim that pigments are non-hazardous and easy to transport materials, and that transports costs are low compared to pigments cost per unit of weight.[59]

(52) Second, a majority of pigments manufacturers either already supply their EEA customers from plants outside the EEA or consider that plants outside the EEA could credibly do so,[60] and a majority of customers either already purchase their pigments globally or would consider doing so in case of a SSNIP within the EEA.[61] As such, it

53 Form CO, paragraph 367.
54 Form CO, paragraph 371.
55 Form CO, paragraph 369.
* Should read: "to"
56 Form CO, paragraph 375.
57 EU Regulation (EC) No 1907/2006.
58 Form CO, paragraphs 377-382.
59 Responses to questions 17, 49, 81, 112 and 136 of *Q1 – Questionnaire to pigments customers.*
60 Responses to questions 8, 7, 27, 28, 46, 47, 65, 66, 84 and 85 of *Q2 – Questionnaire to pigments competitors.*
61 Responses to questions 14, 15, 46, 47, 78, 79, 110, 111, 134 and 135 of *Q1 – Questionnaire to pigments. customers.*

does not appear important for customers that their supplier's factory be close to their production plants.[62]

(53) Third, a majority of customers consider non-EEA manufacturers to be credible alternatives for EEA customers.[63] This last element should however be considered in light of the mixed feedback from customers regarding the ability of Chinese and Indian suppliers to meet their requirements for high quality pigments or to match the Parties' products in terms of quality and consistency; especially for perylene pigments, as set out in section 5.4.1 below.

(54) In light of the above, the Commission considers that, to the effect of the present decision, the relevant geographic market for pigments is worldwide, however with a geographic differentiation between Chinese and Indian suppliers and the rest of the world, in particular as regards perylene and quinacridone. Accordingly, the Commission considers that the assessment of the Transaction would not change under a possible relevant geographic market definition as EEA-wide.

5.3.2. Printing inks

(55) Printing inks are mixtures of colourants (pigments, preparations or dyes), binders, solvents and additives for use in printing processes. Printing inks have numerous applications, such as print media products, packaging products, newspaper and books.

5.3.2.1. Product market definition

Commission's precedents

(56) In previous decisions, the Commission considered segmentations of printing inks both on the demand side, into publication and packaging inks as well as on the supply side, into paste and liquid inks. The Commission noted that the majority of publication inks are paste inks and most packaging inks are liquid inks. The Commission found that on the demand side, there is limited substitutability between liquid and paste inks and that on the supply side, different equipment is required for manufacturing of liquid inks and paste inks.[64]

(57) The Commission has additionally considered a further segmentation of paste inks into heatset ink, coldset ink and sheetfed ink, and of liquid inks into gravure and flexographic inks.[65]

(58) The Commission concluded that a segmentation based on physical characteristics, i.e. liquid inks and paste inks, provides a clearer market delineation than a segmentation based on application. However, finally it left the question open.[66]

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62 Responses to questions 14.1, 46.1, 78.1, 110.1 and 134.1 of *Q1 – Questionnaire to pigments customers.*

63 Responses to questions 16, 48 and 80 of *Q1 – Questionnaire to pigments customers.*

64 Case No. COMP/M.1742 – Sun Chemical / Totalfina / Coates, paragraph 9; COMP/M.3564 – CV / Ani Printing Inks, paragraph 8; COMP/M.3886 – Aster 2 / Flint Ink, paragraph 8.

65 Case No. COMP/M.3886 – Aster 2 / Flint Ink, paragraph 9.

66 Case No. COMP/M.3886 – Aster 2 / Flint Ink, paragraph 12.

The Notifying Party's view

(59) The Notifying Party submits that a segmentation based on the physical characteristics of the ink, i.e. liquid and paste inks, is sufficient and no further segmentation would be appropriate.[67]

(60) The Notifying Party argues that there is a high degree of supply-side substitutability among different types of liquid and paste inks. It further argues that the main difference between paste and liquid inks is the pigment load, with paste inks having a higher proportion of pigments.[68] Despite the differences in pigment loads, the Notifying Party submits that same results can be achieved with liquid inks and paste inks and that the only difference is the amount of ink required. As paste inks contains more pigment, a thinner layer will achieve the same result as a thicker layer of liquid ink.[69] The Notifying Party finally submits that paste and liquid inks do not require different chemistries of pigments; all pigments are suited for use in all types of printing inks.[70]

(61) However, if a subdivision of printing inks based on their physical characteristics (liquid or paste) and their type (between heatset ink, coldset ink and sheetfed ink within paste inks, and between gravure and flexographic inks within liquid inks) was to be applied, the Notifying Party submits that DIC produces a third type of liquid inks that was not examined under any Commission precedent, which is jet inks.[71]

The Commission's assessment

(62) From a demand-side perspective, the market investigation did not provide any indications suggesting that the Commission should depart from its past decisional practice.

(63) From the supply-side, while the market investigation provided strong indications that switching between paste and liquid ink constitutes a major strategic decision, involving considerable costs and efforts,[72] it was inconclusive as to whether printing inks manufacturers had the ability to switch easily and in a timely manner between heatset, coldset and sheetfed inks within paste inks.[73] In a similar fashion, the feedback received from the market investigation did not allow the Commission to form a conclusion as to whether there would be a sufficient degree of supply-side substitutability between gravure, flexographic and jet inks within liquid inks to consider these three types of liquid inks as forming a single product market.[74]

(64) In any event, the Commission considers that, for the purpose of the present case, the exact scope of the product market definition for printing inks can be left open, since no serious doubts as to the compatibility of the Transaction with the internal market

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67 Form CO, paragraph 982.

68 The Notifying Party explains that in general, paste inks have a pigment load of approximately 10-15%, while liquid inks have a pigment load of 8% or lower, with small variations between the different sub-segments. See also footnote 672 of the Form CO.

69 Form CO, paragraph 979.

70 Form CO, paragraph 980.

71 Form CO, paragraph 982.

72 Responses to question 6 of *Q3 – Questionnaire inks competitors.*

73 Responses to question 7 of *Q3 – Questionnaire inks competitors.*

74 Responses to question 8 of *Q3 – Questionnaire inks competitors.*

arise under any plausible product market definition (i.e. segmented between liquid and paste inks or further segmented between heatset, coldset and sheetfed inks within paste inks and between gravure, flexographic and jet inks within liquid inks).

5.3.2.2. Geographic market definition

Commission's precedents

(65) The Commission has previously defined the market for printing inks as EEA-wide. The Commission found that transport costs are comparatively low, there is a significant level of cross-border trade and all major competitors have a multinational presence. Considering the minimal level of imports into the EEA, the Commission excluded a global market.[75]

The Notifying Party's view

(66) The Notifying Party submits that the liquid and paste ink markets are global. It argues that the Commission established in its previous decisions that transportation costs are low, price levels in different continents are comparable, major competitors have multinational presence and local production is not a prerequisite to compete and that those characteristics are indicative of a global market.[76]

The Commission's assessment

(67) From a demand-side perspective, the market investigation did not provide any indications suggesting that the Commission should depart from its past decisional practice.

(68) From the supply-side, while the vast majority of printing inks manufacturers indicated that suppliers from outside the EEA could credibly supply customers within the EEA,[77] the market investigation proved inconclusive as to whether the respondents themselves would have the ability to supply customers within the EEA from plants outside the EEA without incurring additional costs and efforts.[78] Some respondents, though a minority, even suggested that they primarily supplied their customers from manufacturing facilities close to their customer's plant in South-West Europe or the Mediterranean area.[79] Some respondents also suggested that the geographic market could be wider for paste inks than for liquid inks, since liquid inks are more voluminous and transport costs per unit of value would are more important.[80]

(69) In any event, the Commission considers that, for the purpose of the present case, the exact scope of the geographic market definition for printing inks can be left open, since the Transaction does not raise serious doubts as to its compatibility with the internal market, regardless of the precise geographic market definition (i.e. EEA-wide or worldwide).

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75 Case No. COMP/M.3886 – Aster 2 / Flint Ink, paragraphs 13-14.

76 Form CO paragraph 984.

77 Responses to question 10 of *Q3 – Questionnaire inks competitors.*

78 Responses to question 9 of *Q3 – Questionnaire inks competitors.*

79 Responses to question 9 of *Q3 – Questionnaire inks competitors.*

80 Responses to question 11 of *Q3 – Questionnaire inks competitors.*

5.4. Competitive assessment

(70) DIC and BCE both sell pigments belonging to the ten chemical classes listed in Table 1 above. However, for several of these chemical classes, no competition concerns arise, because either (i) only BCE manufactures the concerned product (DIC [...], typically with low market shares), (ii) the Parties' combined market share for the product concerned is only just above 20%, or (iii) the increment brought by the Transaction for the product concerned is small (typically less than [0-5]%), so that the HHI increment is always below 150. For these reasons, the competitive assessment of the horizontal overlaps will focus on the supply of products of the two main chemical classes (namely perylenes and quinacridones, in sections 5.4.1 and 5.4.2 respectively).

5.4.1. Perylenes

(71) Perylene is a chemical class of high-performance organic pigments discovered in 1913 that became commercially available on an industrial scale in the 1950s. Perylenes provide shades of red, maroon, as well as violet and black. Perylenes provide excellent chemical resistance and superior light fastness. Thanks to these properties and to their high transparency, they are used in demanding applications such as exterior automotive coatings, where they can be combined with effect pigments to provide e.g. metallic effects. Perylene pigments are also used in some industrial applications.

(72) Post-Transaction, the Parties' combined market shares will be [40-50]% worldwide (with a [10-20]% increment from DIC). The Notifying Party's estimates of the Parties' and their largest competitors' market shares for perylenes are as follows.

Table 4: Market share estimates for perylenes (in 2019, by volume)[81]

Supplier	Worldwide market shares		EEA supply shares	
	Volume (tonnes)	Share	Volume (tonnes)	Share
DIC	[...]	[10-20]%	[...]	[0-5]%
BASF	[...]	[20-30]%	[...]	[30-40]%
Combined	**[...]**	**[40-50]%**	**[...]**	**[40-50]%**
Liaoning Lian Gang	[...]	[10-20]%	[...]	[10-20]%
Liaoning Honggan Chemical	[...]	[10-20]%	[...]	[10-20]%
Clariant	[...]	[10-20]%	[...]	[20-30]%
Others	*[...]*	*[0-5]%*	*[...]*	*[0-5]%*
Total market	**[…]**	**100%**	[…]	100%

Source: The Parties' sales and RBB competitors' sales and market size estimates.

(73) The Notifying Party has also provided market shares for perylene pigments by colour index. At this level, the only areas of overlap between the Parties' activities is for the colour indices PR179 and PV29. For PR179, the Parties' combined market shares are [40-50]% worldwide (with a [10-20]% increment from DIC). For PV29, the Parties' combined market shares are [30-40]% worldwide (with a [0-5]% increment from BCE). These market shares are as follows.

81 Despite the worldwide nature of the market for pigments, the Commission will also provide the Parties' EEA supply shares at chemical class level, for illustration purposes, throughout this decision.

Table 5: Market share estimates for perylenes by colour index (in 2019, by volume)

Colour index	Worldwide market shares			EEA supply shares		
	DIC	BCE	Combined	DIC	BCE	Combined
PR179	[10-20]%	[20-30]%	**[40-50]%**	[5-10]%	[30-40]%	[30-40]%
PV29	[20-30]%	[0-5]%	**[30-40]%**	[5-10]%	[5-10]%	[10-20]%
PR224	[30-40]%	-	**[30-40]%**	[10-20]%	-	[10-20]%
PBk32	-	[30-40]%	**[30-40]%**	-	[40-50]%	[40-50]%
PR178	-	[90-100]%	**[90-100]%**	-	[90-100]%	[90-100]%

Source: The Parties' sales and RBB market size estimates.

(74) For illustrative purposes, the Commission notes that these market shares do not differ substantially if the market for perylenes were to be subdivided according to the application of the pigments, except for decorative and industrial coating applications at worldwide level, where the Parties' combined market shares are respectively [70-80]% and [50-60]%. The Notifying Party has provided estimates of the Parties' market shares by applications, but the elements provided do not include estimates of the Parties' competitors' market shares. These market shares are as follows.

Table 6: Supply share estimates for perylenes by application (in 2019, by volume)

Application		Worldwide supply shares			EEA supply shares		
		DIC	BCE	Combined	DIC	BCE	Combined
Coating applications	Automotive coating applications	[10-20]%	[20-30]%	**[40-50]%**	[5-10]%	[30-40]%	[30-40]%
	Decorative coating applications	[20-30]%	[40-50]%	**[70-80]%**	[5-10]%	[30-40]%	[40-50]%
	Industrial coating applications	[20-30]%	[30-40]%	**[50-60]%**	[0-5]%	[50-60]%	[50-60]%
Coatings applications (combined)		[20-30]%	[20-30]%	**[40-50]%**	[5-10]%	[30-40]%	[40-50]%
Plastic applications		[5-10]%	[20-30]%	**[30-40]%**	[0-5]%	[20-30]%	[30-40]%
Printing inks applications		[5-10]%	[30-40]%	**[40-50]%**	[5-10]%	[40-50]%	[50-60]%
Other applications		[5-10]%	[30-40]%	**[40-50]%**	[0-5]%	[90-100]%	[90-100]%

Source: The Parties' sales and RBB market size estimates.

(75) Finally, for a hypothetical market encompassing all red pigments, the Parties' combined market shares would be [20-30]% worldwide (with a [5-10]% increment from DIC). The Notifying Party's estimates of the Parties' and their largest competitors' market shares for red pigments overall are as follows.

Table 7: Market share estimates for red pigments (in 2019, by volume)

Supplier	Worldwide market shares		EEA supply shares	
	Volume (tonnes)	Share	Volume (tonnes)	Share
DIC	[...]	[5-10]%	[...]	[0-5]%
BASF	[...]	[10-20]%	[...]	[10-20]%
Combined	**[...]**	**[20-30]%**	**[...]**	**[20-30]%**
Baihe/Lily/Forward Pearl	[...]	[10-20]%	[...]	[10-20]%
Clariant	[...]	[10-20]%	[...]	[10-20]%
Cinic	[...]	[5-10]%	[...]	[5-10]%
Synthesia	[...]	[5-10]%	[...]	[5-10]%
Others	*[...]*	*[30-40]%*	*[...]*	*[30-40]%*
Total market	**[…]**	**100%**	[…]	100%

Source: The Parties' sales and RBB competitors' sales and market size estimates.

The Notifying Party's view

(76) The Notifying Party's arguments are twofold: the Notifying Party first presents general arguments that apply to all categories of pigments under review, and then moves on to presenting arguments which are specific to each of the three colour spaces, which it submits should be considered as separate relevant product markets. In this section the Notifying Party's general arguments will be presented first, followed by the arguments that apply more specifically to perylene pigments. In the following sections, the Commission lays down the specific arguments relating to each specific chemical class.

General considerations on all chemical classes

(77) **With respect to all categories of pigments**, the Notifying Party first explains that the Parties as well as their western competitors face increased competitive pressure from Chinese and Indian pigment manufacturers, who have progressively acquired sufficient know-how over the course of the years to be presently in a situation to supply pigments belonging to all chemical classes at very competitive rates thanks to cheap labour and lower investment in R&D, and with a quality that matches customers' requirements.[82] The Notifying Party argues that, doing so, Chinese and Indian pigments manufacturers have benefitted from the expertise of former employees from western pigment manufacturers,[83] as well as government support,[84] allowing them to enter these markets without incurring the significant developments costs that were necessary to develop the specifications used to manufacture the pigments, as well as the industrial production of these pigments,[85] and to progressively commoditise all chemical classes of pigments, including high performance pigments.[86] As an illustration, the Notifying Party indicates that after the expiration of the relevant patent in 2014, the average selling price of DPP pigments fell from EUR [...] / kg in 2005 to EUR [...] / kg as of today.[87] The Notifying Party also provides extracts from communications made by Chinese and Indian suppliers on their strategy to expand their pigment portfolio from low-end markets and commodity pigments to specialised markets and speciality pigments, and to develop their footprint in western countries[88], [...].[89]

(78) The Notifying Party also emphasises the fact that Chinese and Indian manufacturers take advantage of their better cost position to increase their production capacity and capacity shares, to the effect that the market is currently characterised by over-capacity at worldwide level,[90] and that these manufacturers expand in western markets.[91] In support of this statement, the Notifying Party provides [...],[92] [...].[93] The Notifying

82 Form CO, paragraphs 384 – 390 and 442 – 457.
83 Form CO, paragraph 429.
84 Form CO, paragraphs 426 – 428.
85 Form CO, paragraphs 391 – 393.
86 Form CO, paragraphs 403 – 408.
87 Form CO, paragraph 409.
88 Form CO, paragraphs 410 – 413.
89 Form CO, paragraphs 414 – 425.
90 Form CO, paragraphs 430 – 436.
91 Form CO, paragraphs 437 – 438, 440 – 441 and 458 – 463.
92 Form CO, paragraph 439.
93 Form CO, paragraphs 464 – 472.

Party also indicates that the volume of pigments imported into the EEA corresponds to [80-90]% of the total estimated demand in the EEA (out of these volumes imported into the EEA, [80-90]% originates in Asia, with China representing [40-50]% and India representing [30-40]%),[94] and provides estimates of the proportion imports into the EEA represent out of every chemical class of pigments, as per below:

Table 8: Percentage of EEA supply which corresponds to imports, by chemical class (2019)

Chemical class	Imports as a percentage of the EEA supply by volume	Imports as a percentage of the EEA supply by value
Anthraquinone	[70-80]%	[70-80]%
Azo	[90-100]%	[90-100]%
Azo Condensation	[20-30]%	[10-20]%
Benzimidazolone	[50-60]%	[50-60]%
DPP	[70-80]%	[60-70]%
Dioxazine	[80-90]%	[80-90]%
Indanthrone	[50-60]%	[50-60]%
Isoindoline	[50-60]%	[50-60]%
Isoindolinone	[60-70]%	[50-60]%
Metal Complex	[50-60]%	[40-50]%
Perylene	[30-40]%	[20-30]%
Phthalocyanine	[80-90]%	[80-90]%
Pyrazoloquinazolone	[10-20]%	[20-30]%
Quinacridone	[80-90]%	[70-80]%
Quinophthalone	[40-50]%	[50-60]%

Source: The Parties' sales and RBB competitors' sales and market size estimates.

(79) The Notifying Party also points out the fact that Chinese and Indian manufacturers control the access to several key inputs for the manufacture of certain classes of pigments (mainly naphthalic anhydride for perylene pigments, DMSS for quinacridone pigments, and naphthol AS as well as arylides for azo pigments),[95] some of them (such as naphthalic anhydride) not being produced anywhere else because environmental legislations of western countries would not allow for it.[96] The Notifying Party makes clear that Chinese and Indian pigment producers that are vertically integrated with respect to these raw materials compete with the Parties at worldwide level.[97] The Notifying Party further argues that [...].[98]

(80) Moreover, the Notifying Party argues that, beside Chinese and Indian suppliers,[99] there is also a number of European and US pigments manufacturers that constrain the Parties,[100] and that there is no particular barrier to enter the pigments business, as is evidenced by the recent emergence and expansion of Chinese and Indian pigments manufacturers.[101]

94 Form CO, paragraph 371.
95 Form CO, paragraphs 473 – 478 and 488 – 494.
96 Form CO, paragraphs 158 – 159.
97 Form CO, paragraphs 479 – 487.
98 Form CO, paragraphs 394 – 402.
99 Form CO, paragraphs 550 – 662.
100 Form CO, paragraphs 495 – 549.
101 Form CO, paragraphs 663 – 685.

(81) The Notifying Party also explains that the Parties' customers [...],[102] [...].[103] [...].[104] [...].[105]

(82) Regarding closeness of competition, the Notifying Party explains that the Parties are not close competitors, given that for most chemical classes, either only BCE manufactures this product (DIC [...]) or the increment brought by the Transaction is small.[106] The Notifying Party also explains that research and development is of limited importance for pigments.[107]

(83) In a paper regarding the impact of COVID-19 on the competitive assessment of the Proposed Transaction, the Notifying Party also explains that the COVID-19 pandemic has drastically reduced the demand for pigments,[108] mainly from coating manufacturers active in the automotive industry, because the production of cars was stopped in many plants throughout the world, and sales of cars have collapsed in particular in the EEA,[109] as well as in the printing industry, because advertising materials represent 40% of all printing products in Europe and companies have cut their advertising expenses because of the crisis.[110] The Notifying Party further explains that as a result of this situation, [...],[111] [...],[112] [...],[113] while Chinese pigments manufacturers have resumed operations thanks to the earlier improvement of the sanitary situation in China, and have taken advantage of this situation to further expand their operations.[114]

(84) Finally, in a paper on buyer power of the Parties' customers annexed to the Form CO, the Notifying Party provides additional argumentation on why buyer power would make attempted price increases unsuccessful. The Paper on Buyer Power describes that for perylene and quinacridone, [...].[115][...].[116] [...].[117] [...].[118]

Considerations specific to the perylene chemical class

(85) **More specifically with respect to perylene pigments**, the Notifying Party argues that the Parties are facing increasingly aggressive competition[119] from a number of strong Chinese and Indian suppliers, such as LianGang, HongGang, Gaoyou, Pidilite, Trust

102 Form CO, paragraphs 686 – 710.
103 Form CO, paragraphs 711 – 717.
104 Form CO, paragraphs 718 and 728 – 735.
105 Form CO, paragraphs 719 – 727.
106 Form CO, paragraphs 736-754.
107 Form CO, paragraphs 757-762.
108 Annex 32 to the Form CO, page 2.
109 Annex 32 to the Form CO, pages 3-7.
110 Annex 32 to the Form CO, pages 2-3.
111 Annex 32 to the Form CO, page 2.
112 Annex 32 to the Form CO, page 2.
113 Annex 32 to the Form CO, pages 7 – 8.
114 Annex 32 to the Form CO, page 9.
115 Annex 33 to the Form CO, page 3.
116 Annex 33 to the Form CO, page 4.
117 Annex 33 to the Form CO, pages 5-8.
118 Annex 33 to the Form CO, page 9.
119 Form CO, paragraph 438.

Chem, Union Colours, Anshan Hifi, as well as others,[120] including in the most demanding applications such as automotive coating applications[121] and that Chinese manufacturers are able to match the quality offered by western producers.[122] The Notifying Party explains that both Liaoning Lian Gang's and Liaoning Hong Gang's production capacity for perylene pigments [...], and will continue to increase in the future due to planned capacity expansions. Due to these capacity expansions, the Parties' global capacity share for perylene pigments decreased [...], from [40-50]% to [30-40]%.[123]

(86) In addition, the Notifying Party provides a list of recent entries in the perylene market, mainly from the two Chinese manufacturers: Riwa (who claims to export 80% of its pigment production) and Anshan Hifi, both vertically integrated with respect to naphthalic anhydride (see paragraph (87) below), as well as the Czech manufacturer Synthesia.[124] The Notifying Party submits that Chinese companies that entered into the perylene market benefitted in doing so from the support of Chinese governmental bodies such as the Shenyang Institute of Chemical Engineering and the Tianjin University Chemical Engineering Institute.[125]

(87) In order to illustrate the aggressiveness of Chinese competition with respect to [...],[126] [...].[127] [...]. Finally, the Notifying Party explains that DPP pigments, for which prices have decreased sharply over the past years (see paragraph (61) above) represent a very attractive alternative to perylenes and quinacridones pigments.[128]

(88) The Notifying Party also emphasises the importance of naphthalic anhydride as an input for the production of perylene pigments (see paragraph (63) above), a product which is only produced in China, for which some of the Parties' largest Chinese competitors for perylene products (Liaoning Lian Gang, Liaoning Hong Gang and Anshan Hifi) are vertically integrated, and in relation to which the 25% import tariffs imposed by the American administration on several products imported from China puts DIC at a further [...] disadvantage compared to its Chinese competitors.[129]

(89) The Notifying Party also points out that [...]. [...].[130] The Notifying Party explains that this provides its customers with countervailing buying power, [...].

(90) Finally, in the Notifying Party's paper regarding the impact of COVID-19, [...].[131]

120 Form CO, paragraphs 412 and 777.
121 Form CO, paragraph 439.
122 Form CO, paragraph 442.
123 Form CO, paragraphs 433, 438 and 440.
124 Form CO, paragraph 780.
125 Form CO, paragraph 428.
126 Form CO, paragraph 425.
127 Form CO, paragraph 439.
128 Form CO, paragraph 456.
129 Form CO, paragraphs 394, 398, 477 and 480.
130 Form CO, paragraphs 691, 703 and 792-795.
131 The Notifying Party's submission regarding the impact of COVID-19, page 2.

The Commission's assessment

(91) For the reasons set out in this section, the Commission considers that the Transaction raises serious doubts as to its compatibility with the internal market with respect to perylene pigments. The Commission considers that serious doubts would also arise if the product market were instead considered at colour index level, as set out below.

(92) **First**, as regards the Notifying Party's claim that Chinese and Indian competitors represent a significant competitive pressure on the Parties' activities, while this argument was partly confirmed by the market investigation with respect to several other chemical classes, it was strongly contradicted by the results of the market investigation with respect to perylene pigments. In particular, despite the fact that a small majority of EEA customers would consider switching to a non-EEA supplier in case of a price increase for perylenes in the EEA,[132] less than half of the EEA customers that expressed a view consider that Chinese and Indian suppliers are credible for the supply of perylene pigments to EEA customers.[133] Moreover, a majority of customers procure their perylene pigments exclusively from inside the EEA.[134] When asked to rate perylene manufacturers according to their competitive strength for the supply of perylene pigments in the EEA, customers respond in such a way that no Indian or Chinese manufacturer ranks among the top 5 suppliers.[135] When asked to perform the same exercise for the supply of perylene pigments worldwide, only one Chinese or Indian perylene pigments manufacturer ranks among the top 5 suppliers worldwide, as number 5.[136] These elements should be read in conjunction with the fact that virtually all customers consider that there are less than 5 credible suppliers for perylenes overall,[137] and, based on customers' comments, it is likely that there is in fact an even more limited number of close competitors to the Parties for perylenes, at least for the highest quality grades.[138]

(93) Beyond the average rating received by each competitors, the Commission also considered the number of times they were rated. Since customers only rated competitors they are aware of, have looked into in the past, or have considered as potential suppliers in the past, this is also a good indication of the degree of information customers have regarding the existence of various perylene suppliers, from around the world. While DIC, BCE and Clariant all get above 45 ratings, the number four supplier, Synthesia, gets rated 27 times, and the number one Chinese supplier, Liaoning LianGang, only 24 times.[139]

(94) The fact that a majority of perylene suppliers that the Commission asked customers to rate (based on a list of top perylene competitors provided by the Parties, a majority of which were Chinese suppliers) were unknown to customers is also reflected in the customers' comments. As one customer explains, "*As a customer it is very intransparent whether the a.m. suppliers are really producers.*" Another top customer

132 Responses to question 15 of *Q1 – Questionnaire to pigments customers.*
133 Responses to question 16 of *Q1 – Questionnaire to pigments customers.*
134 Responses to question 14 of *Q1 – Questionnaire to pigments customers.*
135 Responses to question 24 of *Q1 – Questionnaire to pigments customers.*
136 Responses to question 25 of *Q1 – Questionnaire to pigments customers.*
137 Responses to question 21 of *Q1 – Questionnaire to pigments customers.*
138 Responses to questions 24 and 25 of *Q1 – Questionnaire to pigments customers.*
139 Responses to question 25 of *Q1 – Questionnaire to pigments customers.*

of the Parties states that "*[Customer] is generally aware that Clariant has limited participation in perylenes, but does not purchase perylene from Clariant and is not in a position to comment on its competitive strength. [Customer] does not have information on the competitive strength of any of the other suppliers listed and does not purchase perylene from any of them.*" A Japan-based top customer of the Parties also mentions that "*we don't know about such many suppliers mentioned above besides BCE, Clariant and DIC, we don't hear so much about reputation or evaluation about such non-traditional suppliers in our Japanese market.*"[140]

(95) It should also be noted, in addition, that while the volume of pigments imported into the EEA corresponds to [80-90]% of the total estimated demand in the EEA (with Chinese and Indian suppliers representing [80-90]% of these imports – see also paragraph (77) above), this proportion is significantly lower for perylene pigments, namely around [30-40]% in volume and [20-30]% in value. Perylene is in fact, with azo condensation and pyrazoloquinazolone, among the chemical classes for which imports into the EEA represent the smallest fraction of EEA consumption of all organic pigments. Given the apparent lack of obstacles to trade pigments around the world, as well as the fact that [80-90]% of all pigment imports to the EEA are from Asia, this would seem to indicate that a substantial proportion of non-EEA competition for perylenes is considered a less credible source of supply by EEA customers. As such, these elements indicate that there is a degree of geographic differentiation in the market, where Chinese and Indian pigments manufacturers are more distant competitors that do not exert a strong competitive pressure on the Parties' perylene activities.

(96) **Second**, with respect to the Parties' arguments that their perylene customers can and do switch [...][141] [...] while the result of the market investigation clearly evidenced the fact that the most demanding applications for perylene are automotive coating applications, and in particular automotive refinish applications, which are mainly driven by western customers.[142] This distinction is important inasmuch as the Commission considers this to be a heterogeneous product market, where the specific demands of customers will dictate the characteristics of products supplied and the proximity of suppliers in competitive terms. [...][143] [...].[144]

(97) The fact that the Notifying Party was not in a position to provide multiple and meaningful examples of EEA customers switching away their perylene business to Chinese or Indian pigments manufacturers is suggestive of the fact that perylene products manufactured by suppliers other than the Parties are not considered either close or as credible alternatives as the Parties' own perylene products.

(98) In addition, while the Commission acknowledges that [...][145] [...][146]. [...] results of the market investigation, evidencing that a majority of perylene customers consider that prices have increased by 5% or more in the last 5 years relative to the raw materials

140 Responses to question 25 of *Q1 – Questionnaire to pigments customers.*
141 Form CO, paragraph 439.
142 Responses to question 11 of *Q1 – Questionnaire to pigments customers.*
143 Form CO, paragraph 439.
144 Form CO, paragraph 439.
145 Form CO, paragraph 425.
146 Form CO, paragraph 425.

used for their production.[147] Observing a [...] and increase in sales price suggests that while some of the Parties' less demanding customers, accounting for roughly [...]% of the Parties' sales, were able to switch away from them, the vast majority of the Parties' customers had no choice [...] over the period. This is supported by results of the market investigation, evidencing the fact that virtually none of the Parties' customers have qualified a new supplier for their perylene pigments over the past three years,[148] as well as the fact virtually none of the Parties' customers have switched supplier for their perylene pigments over the past three years.[149]

(99) **Third**, as regards the Notifying Party's arguments that the perylene market is characterised by overcapacity, the Commission acknowledges the fact that the figures provided by the Notifying Party can indeed be considered as indicative of a situation of over-supply for perylene pigments overall. However, according to the information provided by the Notifying Party, the vast majority of this overcapacity is due to capacity expansions by Chinese perylene pigments manufacturers,[150] which cannot be considered close competitors to the Parties. As a result, such over-capacity is likely to have little bearing on the Parties' activities and competitive interactions.

(100) **Fourth**, with respects to the Notifying Party's arguments on the importance of naphthalic anhydride, which is only produced in China by some of the Parties' largest perylene competitors, as an input for the production of perylene pigments, the Commission notes that the fact that one of the major inputs for perylene production is controlled by Chinese competitors of the Parties does not appear to put the Parties, or their EEA competitors, at a disadvantage compared to other perylene manufacturers. As mentioned above in paragraph (91), when asked to rate perylene manufacturers according to their competitive strength for the supply of perylene pigments in the EEA, customers respond in such a way that no Indian or Chinese manufacturer ranks among the top 5 suppliers in terms of average rate;[151] and when asked to perform the same exercise for the supply of perylene pigments worldwide, only one Chinese or Indian perylene pigments manufacturer ranks among the top 5 suppliers worldwide, as number 5.[152] Moreover, [...] data [...][153] [...]. It therefore appears quite clearly that, even assuming that the current supply situation with respects to naphthalic anhydride is putting the Parties at a [...] disadvantage compared to their Chinese competitors, the Parties' position, as well as the performance and uniqueness of the products they manufacture, [...].

(101) **Fifth**, as regards the constraints posed to the Parties by EU and US manufacturers, the Commission notes that when asked to rate perylene manufacturers according to their competitive strength for the supply of perylene pigments either in the EEA, or worldwide, customers respond in such a way that BCE and DIC are consistently ranked number one and number two respectively.[154] A competitors also comments in this respect that *"BCE and DIC are the leaders, others like Clariant are distant*

147 Responses to question 31 of *Q1 – Questionnaire to pigments customers.*
148 Responses to question 33 of *Q1 – Questionnaire to pigments customers.*
149 Responses to question 34 of *Q1 – Questionnaire to pigments customers.*
150 Form CO, paragraphs 430 – 436.
151 Responses to question 24 of *Q1 – Questionnaire to pigments customers.*
152 Responses to question 25 of *Q1 – Questionnaire to pigments customers.*
153 Form CO, Annexes 18.1, 18.2 and 18.3.
154 Responses to questions 24 and 25 of *Q1 – Questionnaire to pigments customers.*

seconds."[155] This conclusion would apply to competition from both EEA and non-EEA perylene pigments manufacturers.

(102) **Sixth**, as regards the Parties' arguments regarding the absence of barriers to enter the perylene market, the Commission notes that the manufacturing process described by the Notifying Party for the synthesis of perylene pigments from naphthalic anhydride involves seven different steps, and the Notifying Party acknowledges that the production process is "*comparably complex*".[156] Moreover, the vast majority of customers and competitors were unable to name perylene manufacturers who had recently entered (in the past 5 years)[157] or were intending to enter (in the next 2 years) the market for perylenes.[158] Therefore, contrary to what the Notifying Party submits, barriers to enter the perylene market appear to exist.

(103) **Seventh**, as regards the Parties' argument [...] customers, who enjoy significant bargaining power, this argument was largely contradicted by the market investigation, that evidenced that the majority of customers consider that they have either little or very little bargaining power compared to the strongest suppliers for perylenes.[159] [...].[160] [...][161] [...].

(104) **Eighth**, as regards the Notifying Party's arguments that they are not close competitors in perylene pigments, when asked specifically to name who DIC's top competitors are on the one side, and who BCE's top competitors are on the other side, while other EEA competitors such as Clariant and DCC are mentioned a number of times, the Parties are by far more often mentioned to be each other's closest competitors.[162] Moreover, in relation to the potential impact of the Transaction, several customers suggest that the perylene market is already, as of today, rather concentrated, with very few alternative suppliers. One customer states: "*Actual number of EEA suppliers are reduced, so additional reduction will bring to even less competition*".[163] Another comments: "*The choice was already limited*".[164] A third one explains: "*Not enough serious competitioners* (sic) *for BCE/DIC left in the market, just 1 or 2*".[165] In summary, as a customer of the Parties puts it, "*Alternative suppliers with a quality level of BASF and DIC/Sun are very rare*."[166] These elements support the conclusion that, contrary to what the Notifying Party claims, DIC and BCE are closely competing in the perylene market.

(105) **Ninth**, as regards the impact of the COVID-19, the Commission acknowledges the scale and importance of the very serious disruptions the COVID crisis created in the automotive industry as well as the printing industry, and estimates that in all likelihood

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155 Responses to question 16 of *Q2 – Questionnaire to pigments competitors.*

156 Form CO, paragraph 156.

157 Responses to question 36 of *Q1 – Questionnaire to pigments customers* and question 21 of *Q2 – Questionnaire to pigments competitors.*

158 Responses to question 37 of *Q1 – Questionnaire to pigments customers* and question 22 of *Q2 – Questionnaire to pigments competitors.*

159 Responses to question 27 of *Q1 – Questionnaire to pigments customers.*

160 Form CO, paragraphs 691, 693 and 698.

161 Form CO, paragraphs 693 and 698.

162 Responses to question 26 of *Q1 – Questionnaire to pigments customers.*

163 Responses to question 38 of *Q1 – Questionnaire to pigments customers.*

164 Responses to question 38 of *Q1 – Questionnaire to pigments customers.*

165 Responses to question 38 of *Q1 – Questionnaire to pigments customers.*

166 Responses to question 13 of *Q1 – Questionnaire to pigments customers.*

this crisis may indeed have lasting consequences in these industries, thus affecting the demand for pigments in general, and perylene pigments in particular in the short and even medium terms. Nevertheless, in its assessment, the Commission also needs to take into account the fact that a merger creates a structural changes in a market, which are likely to have long-lasting consequences. In addition, the Commission's initial market investigation was carried out between May-June 2020 and the market investigation following re-notification in October-November 2020, at a time when the COVID-19 and its potential consequences were already known to all market players. The Commission therefore considers that the impact of this crisis taken into account by respondents, in particular when answering questions about the effects of the Transaction and its impact on prices, quality, choice of products and innovation.

(106) **Finally**, and consistent with all of the above, the results of the market investigation showed that customers were concerned about the impact of the Transaction. While a small majority of customers considered that there would remain a sufficient number of suppliers post-Transaction,[167] a significant majority considered that either slight or significant price increases were likely.[168] Moreover, close to half of the customers that expressed a view expected either a small or a large decrease in the choice of products available to them.[169] This is indicative of the fact that a majority of perylene customers expect a significant negative impact of the Transaction.

(107) In conclusion, based on the above findings, the Commission considers that the Transaction raises serious doubts as to its compatibility with the internal market in respect of perylene pigments.

(108) If the relevant product market were instead considered to be at colour index level, only two colour indices would be affected at worldwide level, namely PR179 and PV29. The findings set out above in paragraphs (90) to (106) hold true for PR179 and PV29 individually as well.

(109) In the first market investigation, the majority of concerns voiced by respondents that were specific to a single colour index pertained to PR179. PV29, which is a smaller product market in terms of volume, was mentioned less frequently. Therefore, following the second notification of the Transaction, the Commission performed a targeted market investigation on, among others, perylene colour index PV29. This targeted market investigation further confirmed that the findings for perylene apply to PV29 as well. In particular, the lack of credible alternative suppliers for perylene pigments would appear to be even more critical for PV29 (in addition to PR179).

(110) The main competitors for PR179 and PV29 identified by the Parties are Chinese companies Liaoning Hong Gang and Liaoning Liang Gang, which in fact appear to belong to the same group, Liaoning Companies according to some respondents. The large majority of respondents to the market investigation indicated that they are not familiar with either of the Liaoning Companies. [170] Those that did indicate to be

167 Responses to question 38 of *Q1 – Questionnaire to pigments customers.*

168 Responses to question 39 of *Q1 – Questionnaire to pigments customers.*

169 Responses to question 39 of *Q1 – Questionnaire to pigments customers.*

170 See question 3 of Q6 – Questionnaire to pigments customers and question 3 of Q7 – Questionnaire to pigments competitors.

familiar with them, did not consider them as credible suppliers[171], or able to meet quality requirements.[172] Additionally, respondents were not familiar with alternative suppliers of PR179 and PV29 besides the Parties and the Liaoning Companies.[173]

(111) For PV29, customers indicated that switching supplier of PV29 quickly and without significant cost is not possible[174] and that insufficient suppliers would remain post-Transaction[175]. As a result, a significant number of customers expect a negative impact on price as a result of the Transaction.[176]

(112) In conclusion, in the light of the above findings, the Commission considers that the Transaction raises serious doubts as to its compatibility with the internal market as regards the market for perylene pigments overall due to non-coordinated horizontal effects, and, should the relevant markets be defined at the colour index level, for pigments PR179 and PV29.

5.4.2. Quinacridones

(113) Quinacridone is a chemical class of organic pigments that became industrially available in the 1960s. Quinacridone pigments come in colours varying from yellowish red to violet. Quinacridone is characterized by high levels of transparency, colour retention, lightfastness, weather fastness and resistance to migration[177] and heat. Quinacridone is produced from the raw material dimethyl succinyl succinate ("DMSS").

(114) Post-Transaction, the Parties' combined market shares will be [20-30]% worldwide (with a [10-20]% increment from BCE). The Notifying Party's estimates of the Parties' and their largest competitors' market shares for quinacridones worldwide are shown in Table 9.

Table 9: Market share estimates for quinacridone (in 2019, by volume)

Supplier	Worldwide market shares		EEA supply shares	
	Volume (tonnes)	Share	Volume (tonnes)	Share
DIC	[...]	[10-20]%	[...]	[5-10]%
BCE	[...]	[10-20]%	[...]	[5-10]%
Combined	**[...]**	**]20-30]%**	**[...]**	**[10-20] %**

171 See questions of Q6 & 7– Questionnaire to pigments customers and questions 5 & 6 of Q7 – Questionnaire to pigments competitors.

172 For example, one customer explained that " .... *The quality of this products is not acceptable. The contact is very difficult to get same technical support....*", while a competitor said that "*..As far as we know, quality of Liaoning Hong Gang / Liaoning Lian Gang is not at the level of BASF / DIC /Sun, especially since this pigment is mostly used in the automotive coatings, requiring high quality standards...*".

173 Responses to questions 3, 4, 5, 6 and 7 of *Q6 – Questionnaire to pigments customers* and responses to questions 3, 4, 5 and 6 of *Q7 – Questionnaire to pigment competitors*.

174 ee question 9 of Q6 – Questionnaire to pigments customers.

175 See question 10 of Q6 – Questionnaire to pigments customers and question 9 of Q7 – Questionnaire to pigments competitors.

176 Responses to questions 9, 10 and 11 of *Q6 – Questionnaire to pigments customers*.

177 Migration, in the context of pigments, refers to the ability of some pigments to make their way through the substrate, through diffusion at molecular level. When several pigments are mixed together and have different migration properties, this can result in a non-homogeneous color within the substrate. As a result, migration is generally considered as a phenomenon that should be avoided, and resistance to migration is regarded as an advantage.

Supplier	Worldwide market shares		EEA supply shares	
	Volume (tonnes)	Share	Volume (tonnes)	Share
Clariant	[...]	[10-20]%	[...]	[10-20]%
Wenzhou Jinyuan	[...]	[10-20]%	[...]	[5-10]%
Baihe/Lily/GGInk/Forward Pearl	[...]	[10-20]%	[...]	[10-20]%
Gaoyou	[...]	[5-10]%	[...]	[5-10]%
Meghmani	[...]	[5-10]%	[...]	[5-10]%
Pidilite	[...]	[5-10]%	[...]	[5-10]%
Zhejiang Yongquan	[...]	[5-10]%	[...]	[5-10]%
Sudarshan	[...]	[5-10]%	[...]	[5-10]%
Others	*[...]*	*[5-10]%*	*[...]*	*[5-10]%*
Total market	**[...]**	**100**	[...]	100

Source: The Parties' sales and RBB competitors' sales and market size estimates.

(115) The Notifying Party has also provided market shares for quinacridone pigments by colour index. At this level, Parties' activities result in affected markets for colour indices PR202, where the Parties' combined market shares are [20-30]% worldwide (with a [5-10]% increment from DIC), and PV19, where the Parties' combined market shares are [20-30]% worldwide (with a [10-20]% increment from DIC). An overview of the market shares by colour index is provided in Table 10.

Table 10: Market share estimates for quinacridones by colour index (in 2019, by volume)

Colour index	Worldwide market shares			EEA supply shares		
	DIC	BCE	Combined	DIC	BCE	Combined
PR122	[10-20]%	[0-5]%	**[10-20]%**	[5-10]%	[0-5]%	[5-10]%
PR202	[5-10]%	[10-20]%	**[20-30]%**	[5-10]%	[10-20]%	[20-30]
PV19	[10-20]%	[10-20]%	**[20-30]%**	[5-10]%	[10-20]%	[10-20]%

Source: The Parties' sales and RBB market size estimates.

(116) For illustrative purposes, the Commission notes that these market shares do not differ substantially if the market for quinacridone were to be subdivided according to the application of the pigments, except for automotive coating applications and plastic applications at worldwide level, where the Parties' combined market shares are respectively [30-40]% and [30-40]%. The Notifying Party has provided estimates of the Parties' market shares by applications (Table 11), but the data provided does not include estimates of competitors' market shares.

Table 11: Supply share estimates for quinacridones by application (in 2019, by volume)

Application		Worldwide supply shares			EEA supply shares		
		DIC	BCE	Combined	DIC	BCE	Combined
Coating applications	Automotive coating	[5-10]%	[20-30]%	**[30-40]%**	[5-10]%	[20-30]%	[30-40]%
	Decorative coating applications	[5-10]%	[0-5]%	**[10-20]%**	[0-5]%	[0-5]%	[0-5]%
	Industrial coating applications	[10-20]%	[5-10]%	**[10-20]%**	[5-10]%	[5-10]%	[10-20]%
Coatings applications (combined)		[5-10]%	[5-10]%	**[10-20]%**	[5-10]%	[5-10]%	[10-20]%
Plastic applications		[10-20]%	[10-20]%	**[30-40]%**	[5-10]%	[10-20]%	[10-20]%
Printing inks applications		[20-30]%	[0-5]%	**[20-30]%**	[20-30]%	[0-5]%	[30-40]%
Other applications		[20-30]%	[5-10]%	**[20-30]%**	[5-10]%	[5-10]%	[10-20]%

Source: The Parties' sales and RBB market size estimates.

(117) As mentioned above in section 5.4.1, the Notifying Party argues that all red pigments with similar physical properties form a single product market. Quinacridone pigments would be part of this hypothetical combined market. In this combined market, the Parties' combined market shares amounts to [20-30]% worldwide (with a [5-10]% increment from DIC).The Notifying Party's estimates of the Parties' and their largest competitors' market shares for red pigments overall worldwide are as laid out above in Table 7.

The Notifying Party's view

(118) As described in section 5.4.1, the Notifying Party presents arguments in its competitive assessment that apply broadly to all pigments, as well as arguments specific to quinacridone. Arguments that apply to all pigments have been laid out in section 5.4.1; arguments specific to quinacridones are presented in this section.

(119) The Notifying Party submits that quinacridone customers have significant countervailing buyer power. To evidence this, [...].[178] The Notifying Party also submits that customers have plenty of credible alternative suppliers of quinacridone they can switch to, as will be detailed below.

(120) The Notifying Party indicates that [...].[179] [...].[180]

(121) As described in paragraphs (76) and (77), the Notifying Party argues that the Parties experience significant competition, particularly from Chinese and Indian entrants for all pigments. For quinacridones specifically, the Notifying Party submits that the Parties' global capacity shares are falling due to capacity expansions of competitors, from [20-30]% in 2017 to [20-30]% in 2020. By way of illustration, the Notifying Party mentions a capacity expansion [...] by Pidlite [...], as well as capacity expansions [...] by Ami Pigments [...], [...] by Gharda [...] and [...] by Sudarshan [...].[181] The Notifying Party's estimates of global quinacridone production capacities are provided in Table 12, and show that according to the Notifying Party, six out of the top manufacturers are from China or India.[182]

(122) The Notifying Party indicates that because of the capacity expansions, global production capacities exceeded demand by [more than 20]% in 2018, putting pressure on prices.[183] Additionally, it indicates that DPP, since its patent expiry, has become a lower-cost alternative to quinacridone, putting further downward pressure on prices.[184]

178 Form CO, paragraph 796-797.
179 Form CO, paragraph 798.
180 Form CO, Figure 105.
181 Form CO, paragraph 434. [...].
182 Form CO, paragraph 454.
183 Form CO, paragraph 455.
184 Form CO, paragraph 456.

Table 12: Notifying Party's global quinacridone capacity estimates

Manufacturer	Country	Capacity (tons)
DIC	JP	[...]
Clariant - Germany	CH	[...]
Wenzhou Jinyuan	CN	[...]
Baihe-Lily	CN	[...]
BCE	DE	[...]
Gaoyou	CN	[...]
Meghmani	IN	[...]
Pidilite	IN	[...]
Sudarshan	IN	[...]

Source: Notifying Party, Form CO, Figure 135

(123) The Notifying Party argues that Chinese and Indian players compete in the production and sale of quinacridone across applications, including highly demanding applications such as automotive. The Notifying Party provides a variety of its competitors' marketing materials, in which they mention the automotive segment as a strategic priority or recommend their products for automotive applications, to illustrate this.[185]

(124) Finally, the Notifying Party submits that Chinese and Indian suppliers have the additional benefit of easier and more economical access to raw materials.[186] By way of illustration, it describes that [...]. The Notifying Party indicates that competing quinacridone producers, such as Clariant and Lily Group, are backwards integrated into DMSS and therefore enjoy a cost advantage.[187]

The Commission's assessment

(125) For the reasons set out in this section, the Commission considers that while competitive concerns appear less likely for quinacridones overall, the Commission concludes that the Transaction raises serious doubts as to its compatibility with the internal market with respect to colour index PR202.

(126) Should the relevant product market for quinacridone pigments be considered at chemical class level, the Parties' combined market shares for quinacridone pigments would be [20-30]% worldwide, with an increment of [10-20]% due to the combination with BCE.

(127) If the product market for quinacridone pigments was further segmented by colour indices, it would be affected for the colour indices PR 202 and PV19. For PR202 the global combined market share would be [20-30]%, with an increment of [5-10]% by DIC, and for PV 19 it would be [20-30]%, with an increment of [10-20]% by DIC.

(128) In the case of quinacridones, the Commission's market investigation generally confirms the Notifying Party's statement that Chinese and Indian suppliers are credible competitors. All competitors[188], as well as the majority of customers[189], consider that Chinese and Indian competitors can credibly supply customers in the

185 Form CO, paragraphs 445-452.
186 Form CO, paragraph 394.
187 Form CO, paragraph 395.
188 Responses to question 28 of *Q2 – questionnaire to pigments competitors.*
189 Responses to question 48 of *Q1 – questionnaire to pigments customers.*

EEA. A small majority of customers indicate that they already source part of their quinacridones from Chinese and Indian suppliers today.[190]

(129) Despite these results, a majority of customers indicated there are barriers for suppliers from outside the EEA to supply EEA customers. One of the barriers named most frequently are regulatory barriers, notably REACH certification.[191] However, as the Notifying Party indicates, a significant number of non-EEA pigments suppliers have obtained REACH certification.[192] These non-EEA suppliers include Chinese and Indian suppliers of quinacridone pigments.[193]

(130) Nevertheless, overall, a majority of customers and competitors expect no impact on their business with respect to quinacridones in general as a result of the Transaction. Some mention that if the merged entity rationalises its product portfolio post-Transaction, this may lead to requalification cost and effort.[194] Notably, one customer states: *"The situation with [q]uinacridones is much better than with the perylenes. Especially because Clariant remains as second market leader and there are already existing alternative capacities in Asia."*[195]

(131) However, with regard to specific colour indices within quinacridone, some customers mention that competition is less credible for specific colour indices because competitors to the Parties do not meet the required quality standards. Notably, one large customer states: *"PR 202 in suitable qualities is currently only offered by the two parties, a Chinese manufacturer is currently developing an alternative product, PR 122 today available qualities from Chinese and Indian suppliers can substitute the products of the parties, for PV 019 substitution is difficult as each product vary in its content of beta- and gamma crystal phase which leads to different technical performance"*.[196]

(132) Contrary to the Notifying Party's claim that customers exercise significant countervailing buyer power, the majority of customers indicate that they experience their buyer power as equal or lower than that of the Parties. This includes large customers, one of which indicates that bargaining power is specifically low for colour indices for which there are few or no alternatives to the Parties, such as PR 202: "*For P R 122 bargaining power is significant. For P R 202 and For P V 019 lower bargaining power.*" Another customer points to the difficulty to substitute pigments: "*Main reason for low negotiation power rate is the difficulty to substitute a pigment by an other one from a competitor. We often are in a kind of "captive" commercial situation.*" [197]

(133) Both customers and competitors consider Clariant as the strongest player in quinacridone pigments. The Parties are considered as the second and third strongest,

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190 Responses to question 46 of *Q1 – questionnaire to pigments customers.*

191 Responses to question 49 of *Q1 – questionnaire to pigments customers.*

192 See Form CO, paragraph 380.

193 See Form CO, paragraph 382.

194 Responses to question 72 of *Q1 – questionnaire to pigments customers* and question 43 of *Q2 – questionnaire to pigments competitors.*

195 Responses to question 70 of *Q1 – questionnaire to pigments customers.*

196 Responses to question 48 of *Q1 – questionnaire to pigments customers.*

197 Responses to question 59 of *Q1 – questionnaire to pigments customers.*

followed by Sudarshan of India.[198] However, one competitor indicates the picture is different for some colour indices, indicating that PR202 is only supplied by the Parties.[199]

(134) Finally, the large majority of customers consider that sufficient suppliers of quinacridone pigments in general remain post-Transaction.[200] A small majority of customers expect a small increase in price, while most expect quality and innovation to be unaffected. Results on product choice are inconclusive, with no strong majority for any option.[201] The majority of competitors expect no impact on price, quality or product innovation and a slight decrease in choice.[202] However, some customers mention that too few alternative suppliers would remain for colour index PR202.[203]

(135) Because of the mixed feedback on quinacridone colour indices PR202 and PV19 in the initial market investigation, the Commission focused, among others, specifically on these two colour indices in its targeted market investigation following re-notification of the Transaction.

(136) **For PR202**, the only competitors identified by the Notifying Party, are Wenzhou Jinyuan and Zhejiang Yongquan of China. The majority of the respondents to the targeted market investigation following re-notification indicated not to be familiar with either of those competitors. The large majority of those that were familiar with them, indicated not to consider either of them as a credible PR202 supplier that is able to meet quality requirements. [204] Additionally, respondents were not familiar with alternative suppliers of PR202 besides the Parties, Wenzhou Jinyuan and Zhejiang Yongquan.[205]

(137) Customers indicated it is difficult to switch from PR202 to an alternative supplier of PR202 quickly and without significant cost.[206] As a result, the majority of customers consider that insufficient suppliers remain post-Transaction and that the Transaction will have a negative impact on price.[207]

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198 Responses to question 57 of *Q1 – questionnaire to pigments customers* and question 36 of *Q2 – questionnaire to pigments competitors.*

199 Responses to question 36 of *Q2 – questionnaire to pigments competitors.*

200 Responses to question 70 of *Q1 – questionnaire to pigments customers* and question 36 of *Q2 – questionnaire to pigments competitors.*

201 Responses to question 71 of *Q1 – questionnaire to pigments customers.*

202 Responses to question 42 of *Q2 – questionnaire to pigments competitors.*

203 Responses to question 70 of *Q1 – questionnaire to pigments customers.*

204 For example, on the customer side one explained that explained that " *…. For "ideological" reasons we prefer to avoid any supplies from Chinese suppliers - potential troubles with quality standards, no trust in their declarations, governmental influence on their business ….*", another said that " *The quality of this products is not acceptable. And the delivery time is very long. Don't have any profesional technical support.* "; while a competitor said that "*..Wenzhou Jinyuan is mainly focussed on China in general and regarding PR 202, they are small. Zhejiang Yongquan is not known to us as a PR 202 producer …*", while another one said that " *…As per best of our knowledge only Wenzhou Jinyuan is producing PR202 in smaller quantities. Zhejiang Yongquan is not known as a manufacturer of PR202…*".

205 Responses to questions 13, 14, 16 and 17 of *Q6 – Questionnaire to pigments customers* and responses to questions 11, 12, 13 and 14 of *Q7 – Questionnaire to pigment competitors*.

206 Responses to question 19 of *Q6 – Questionnaire to pigments customers.*

207 Responses to questions 20 and 21 of *Q6 – Questionnaire to pigments customers.*

(138) **For PV19,** the targeted market investigation following re-notification did not indicate competitive concerns. Respondents were able to name credible suppliers besides the Parties, such as European suppliers Heubach and Clariant, and Asian suppliers such as Sudarshan.[208] As a result, most respondents expected that sufficient suppliers for PV19 would remain post-Transaction, and that impact on prices would be neutral.[209]

(139) In conclusion and in light of the above findings, the Commission considers that the Transaction raises serious doubts as to its compatibility with the internal market for quinacridone colour index PR202 due to non-coordinated horizontal effects. While competitive concerns seem less likely for quinacridone colour index PV19 and for an overall quinacridone market, this can ultimately be left open as any such concerns are ultimately remedied (See Section 6).

5.4.3. Phthalocyanines

(140) Phthalocyanine constitutes a chemical class of organic pigments. Its colour spectrum includes blue, cyan and green. Phthalocyanine is characterized by high colour strength, durability, high light fastness and weather fastness. It is viewed as a base ingredient for a wide range of blue as well as green mixtures.

(141) Post-Transaction, the Parties' combined market shares by volume will be [10-20]% worldwide (with a [5-10]% increment from BCE). The Notifying Party's estimates of the Parties' and their largest competitors' market shares for phthalocyanines worldwide and in the EEA for 2019 are shown in Table 13.

Table 13: Market share estimates for phthalocyanine (in 2019, by volume)

Supplier	Worldwide		EEA	
	Volume (tonnes)	Market share	Volume (tonnes)	Supply share
DIC	[...]	[5-10]%	[...]	[10-20]%
BASF	[...]	[5-10]%	[...]	[10-20]%
DIC/BASF Combined	**[...]**	**[10-20]%**	[...]	[20-30]%
Shuangle	[...]	[5-10]%	[...]	[0-5]%
Heubach	[...]	[5-10]%	[...]	[5-10]%
Meghmani	[...]	[5-10]%	[...]	[5-10]%
Mazda Color	[...]	[5-10]%	[...]	[0-5]%
Yabang	[...]	[5-10]%	[...]	[0-5]%
Dhanveen	[...]	[5-10]%	[...]	[0-5]%
Huaihua / Nantong Lynwon	[...]	[0-5]%	[...]	[0-5]%
JECO	[...]	[0-5]%	[...]	[0-5]%
Melida	[...]	[0-5]%	[...]	[0-5]%
Ramdev	[...]	[0-5]%	[...]	[0-5]%
Aegis(Choksi Pigment)	[...]	[0-5]%	[...]	[0-5]%
Sudarshan	[...]	[0-5]%	[...]	[5-10]%
Nirbhay	[...]	[0-5]%	[...]	[0-5]%
Nanavati/Phthalo Color/A-one	[...]	[0-5]%	[...]	[0-5]%
Shreyas Intermediates	[...]	[0-5]%	[...]	[0-5]%
Asahi Songwon	[...]	[0-5]%	[...]	[0-5]%
Subashri	[...]	[0-5]%	[...]	[0-5]%
Other	[...]	[10-20]%	[...]	[5-10]%
TOTAL market	**[...]**	**100.0%**	**[...]**	**100.0%**

Source: The Parties' sales and RBB competitors' sales and market size estimates.

208 Responses to questions 24 and 25 of *Q6 – Questionnaire to pigments customers* and responses to questions 20 and 21 of *Q7 – Questionnaire to pigment competitors*.

209 Responses to questions 28-31 of *Q6 – Questionnaire to pigments customers* and responses to questions 24-27 of *Q7 – Questionnaire to pigment competitors*.

(142) In addition, the Notifying Party provided market shares for a hypothetical market encompassing all phthalocyanine pigments sold in dry form as well as in mono-pigment preparations. For such a market, the Parties' market shares would not differ substantially, as the Parties' combined market shares would be [10-20]% worldwide (with a [5-10]% increment from DIC).

(143) The Notifying Party has also provided market shares for phthalocyanine pigments by colour index. At this level, Parties' activities overlap for colour indices PB15-4, where the Parties' combined market shares are [20-30]% worldwide (with a [10-20]% increment from BCE, reflecting that the Parties have a similar market position) as well as for PG36, where the Parties' combined market shares are [20-30]% worldwide (with a [0-5]% increment from DIC). An overview of the market shares by colour index is provided in Table 14.

Table 14: Market share estimates for phthalocyanine by colour index (in 2019, by volume)

Colour index	Worldwide market shares			EEA supply shares		
	DIC	BCE	Combined	DIC	BCE	Combined
PB15-1	[5-10]%	[10-20]%	**[10-20]%**	[5-10]%	[20-30]%	**[30-40]%**
PB15-2	[5-10]%	[5-10]%	**[10-20]%**	[10-20]%	[10-20]%	**[30-40]%**
PB15-4	[10-20]%	[10-20]%	**[20-30]%**	[10-20]%	[10-20]%	**[30-40]%**
PB15-6	[0-5]%	[10-20]%	**[10-20]%**	[0-5]%	[30-40]%	**[30-40]%**
PG7	[5-10]%	[10-20]%	**[10-20]%**	[10-20]%	[10-20]%	**[20-30]%**
PG36	[0-5]%	[20-30]%	**[20-30]%**	[0-5]%	[20-30]%	**[20-30]%**

Source: The Parties' sales and RBB market size estimates.

(144) For illustrative purposes, the Commission notes that these market shares do not differ substantially if the market for phthalocyanines were to be subdivided according to the application of the pigments, except for industrial coating applications and plastic applications at worldwide level, where the Parties' combined market shares are respectively [20-30] % and [10-20]%. The Notifying Party has provided estimates of the Parties' market shares by applications (Table 15), but the data provided do not include estimates of competitor market shares.

Table 15: Supply share estimates for phthalocyanine by application (in 2019, by volume)

Application		Worldwide supply shares			EEA supply shares		
		DIC	BCE	Combined	DIC	BCE	Combined
Coating applications	Automotive coating applications	[0-5]%	[5-10]%	**[5-10]%**	[5-10]%	[10-20]%	**[20-30]%**
	Decorative coating applications	[0-5]%	[5-10]%	**[5-10]%**	[0-5]%	[10-20]%	**[20-30]%**
	Industrial coating applications	[5-10]%	[10-20]%	**[20-30]%**	[5-10]%	[30-4-]%	**[40-50]%**
Coatings applications (combined)		[0-5]%	[5-10]%	**[10-20]%**	[5-10]%	[20-30]%	**[20-30]%**
Plastic applications		[5-10]%	[10-20]%	**[10-20]%**	[5-10]%	[10-20]%	**[20-30]%**
Printing inks applications		[10-20]%	[5-10]%	**[10-20]%**	[20-30]%	[5-10]%	**[30-40]%**
Other applications		[0-5]%	[0-5]%	**[5-10]%**	[5-10]%	[0-5]%	**[10-20]%**

Source: The Parties' sales and RBB market size estimates.

(145) Similarly to red pigments, the Parties argue that the market is worldwide and that all blue pigments (which include phthalocyanine pigments, but also indanthrone pigments) form a single product market, for which Post-Transaction, the Parties' combined market shares would be [10-20]% worldwide (with a [5-10]% increment from BCE). These figures are very close to the Parties' market shares for phthalocyanine pigments, because phthalocyanines represent in volume around 90% of all blue pigments. The Notifying Party's estimates of the Parties' market shares for blue pigments overall are as follows. The data provided by the Parties does not include estimates of competitor market shares.

Table 16: Market share estimates for blue pigments (in 2019, by volume)

Supplier	Worldwide		EEA	
	Volume (tonnes)	Share	Volume (tonnes)	Share
DIC	[...]	[5-10]%	[...]	[10-20]%
BASF	[...]	[5-10]%	[...]	[10-20]%
Combined	**[...]**	**[10-20]%**	**[...]**	**[20-30]%**
Others	*[...]*	*[80-90]%*	*[...]*	*[70-8-]%*
Total market	**[...]**	**100%**	**[...]**	**100%**

Source: The Parties' sales and RBB competitors' sales and market size estimates.

The Notifying Party's view

(146) In addition to the general arguments (applying to all pigments) summarised in paragraphs (75) - (80) of the present decision, the Notifying Party submits the following arguments, that apply particularly to blue colour space pigments and phthalocyanines.

(147) The Notifying Party submits that DIC has [...] production capabilities for blue colour space pigments in general and for phthalocyanines in particular. [...] approximately [...]. For the remaining [...].[210]

(148) The Notifying Party claims that phthalocyanines, are highly commoditised pigments and that past market entries from China and India resulted in significant price erosions.[211]

(149) The Notifying Party also argues that post-Transaction, the Parties will continue to face strong competition from multiple global competitors and in particular, significant competitive pressure from Chinese and Indian suppliers of blue colour space pigments.[212]

(150) Moreover, the Notifying Party submits that the market is characterised by significant overcapacity in the segment for blue colour space pigments in general and for phthalocyanine in particular. The Notifying Party estimate that in 2018 the production capacity for phthalocyanine present in China and India alone is sufficient to serve the entire market. The Notifying Party considers that, as a consequence, competitors could step in in the event of price increases post-Transaction.[213]

210 Form CO, paragraph 816.

211 Form CO, paragraph 821.

212 Form CO, paragraph 819 et seq.

213 Form CO, paragraph 822.

(151) The Notifying Party argues that the Parties' customers [...] have countervailing buyer power [...].[214]

The Commission's assessment

(152) For the reasons set out in this section, the Commission considers that serious doubts can be excluded for phthalocyanine pigments (in case of a product market definition by chemical class, with product differentiation within the product market) as well as for colour indices within the phthalocyanines chemical class (in case of a product market definition by colour index).

(153) If the product market for phthalocyanine pigments was considered at chemical class level, the Parties' combined market shares for phthalocyanine pigments would be [10-20]% worldwide, well below the 20% threshold for a market to be considered as affected.

(154) If the product market for phthalocyanine pigments was further segmented by colour indices, it would be affected only for the colour indices PB15-4 and PG36.

(155) For PG36, the increment from the Transaction would remain marginal ([0-5]%) with a HHI increment of <150. Therefore, in the absence of any additional specific motive for concern (see also paragraph (136) below), the Commission considers that the Transaction does not raise competition concerns in relation to the market for PG36.

(156) For PB15-4, the Parties' combined market shares are [20-30]% worldwide, with a [10-20]% increment from BCE and an HHI increment of [390-400]. However, the market investigation didn't reveal any general concerns with respect to phthalocyanine pigments, nor did it reveal any specific concern with respect to the PB15-4 colour index.

(157) With respect to phthalocyanine pigments overall, which is not an affected market, the market investigation confirmed the Notifying Parties' claim that the phthalocyanine pigments are a commoditised class of pigments, with a competitive market as well as strong and credible competitors. A vast majority of respondents consider that there will remain a sufficient choice of credible phthalocyanine suppliers post-Transaction at both EEA and worldwide level,[215] and the majority of customers expected either no impact or a decrease in the price of phthalocyanine pigments as a result of the Transaction at both worldwide and EEA level.[216]

(158) PB 15-4 specifically is mentioned on very few occasions by either customers or competitors. While a number of customers emphasised for instance the very specific tint and properties of PB15-1 and PB15-6,[217] this was not the case for PB15-4. One of the very few occasions where PB15-4 are mentioned explicitly is to emphasise the ability of switching supplier for this particular colour index: "*Changing the supplier for PB15:4 gave remarkable savings*"[218] For these reasons, the Commission considers

214 Form CO, paragraph 823-826.

215 Responses to question 102 of *Q1 – Questionnaire to pigments customers.*

216 Responses to question 103 of *Q1 – Questionnaire to pigments customers.*

217 Responses to question 84 of *Q1 – Questionnaire to pigments customers.*

218 Responses to question 91 of *Q1 – Questionnaire to pigments customers.*

that the Transaction does not raise competition concerns in relation to the market for PB15-4.

(159) In light of the above, the Commission considers that the Transaction does not raise serious doubts as to its compatibility with the internal market on the market for phthalocyanines due to non-coordinated horizontal effects, irrespective of whether the relevant product market is considered to be phthalocyanines as a chemical class, or further segmented by colour indices.

5.4.4. Isoindolines

(160) Isoindoline is a chemical class of high-performance organic pigments that became commercially available in the 1970s. Isoindolines provide shades of yellow, orange, red and brown.

(161) Post-Transaction, the Parties' combined market shares will be [20-30]% worldwide (with a [0-5]% increment from DIC). The Notifying Party's estimates of the Parties' and their largest competitors' market shares for isoindoline are as follows.

Table 17: Market share estimates for isoindoline (in 2019, by volume)

Supplier	Worldwide		EEA	
	Volume (tonnes)	Market share	Volume (tonnes)	Supply share
DIC	[...]	[0-5]%	[...]	[0-5]%
BASF	[...]	[20-30]%	[...]	[20-30]%
Combined	**[...]**	**[20-30]%**	**[...]**	**[20-30]%**
Clariant	[...]	[10-20]%	[...]	[10-20]%
Anshan Hifi	[...]	[10-20]%	[...]	[5-10]%
Cinic	[...]	[10-20]%	[...]	[10-20]%
Sudarshan	[...]	[10-20]%	[...]	[10-20]%
Baihe/Lily/GGInk/Forward Pearl	[...]	[10-20]%	[...]	[5-10]%
Others	*[...]*	*[10-20]%*	*[...]*	*[10-20]%*
Total market	[…]	**100%**	[…]	**100%**

Source: The Parties' sales and RBB competitors' sales and market size estimates.

(162) The Notifying Party has also provided market shares for isoindoline pigments by colour index. There are only two colour indices within isoindolines, and the Parties' activities overlap with respect to both of them. More in details, Parties' activities overlap for colour indices PY139, which is not affected, as well as for PY185, for which the Parties' combined market shares are [40-50]% worldwide (with a [0-5]% increment from DIC). An overview of the market shares by colour index is provided in Table 18 below.

Table 18: Market share estimates for isoindoline by colour index (in 2019, by volume)

Colour index	Worldwide market shares			EEA supply shares		
	DIC	BCE	Combined	DIC	BCE	Combined
PY139	[0-5]%	[10-20]%	**[10-20]%**	[0-5]%	[20-30]%	**[20-30]%**
PY185	[0-5]%	[40-50]%	**[40-50]%**	[0-5]%	[40-50]%	**[40-50]%**

Source: The Parties' sales and RBB market size estimates.

The Notifying Party's view

(163) In addition to the general arguments (applying to all pigments) summarised in paragraphs (75) - (80) of the present decision, the Notifying Party submits that the increment brought by the Transaction is minimal,[219] that the Parties are facing the competition of several strong suppliers, including Chinese and Indian suppliers, such as Clariant, Anshan Hifi, Cinic, Sudarshan, Baihe/Lily,[220] but also Vijay and Trust Chem,[221] and that, as a result of the fierce competition in the isoindoline market, [...].[222]

(164) The Notifying Party also emphasises the importance of o-phthalodinitrile, gaseous ammonia, solvents, diiminoisoindoline, methylene compounds and acids that are used as inputs for the production of isoindoline pigments. The Notifying Party claims that these products are controlled by Chinese manufacturers, including some of the Parties' Chinese competitors for isoindoline products.[223]

(165) The Notifying Party also points out that both Parties' customer bases for isoindoline pigments [...]. [...].[224] The Notifying Party explains that this provides its customers with countervailing buying power, [...].[225]

The Commission's assessment

(166) For the reasons set out in this section, the Commission considers that serious doubts can be excluded for isoindoline pigments (in case of a product market definition by chemical class, with product differentiation within the product market) as well as for colour indices within the isoindolines chemical class (in case of a product market definition by colour index).

(167) If the product market for isoindoline pigments were considered at chemical class level, the Parties' combined market shares for isoindoline pigments would be [20-30]% worldwide, just over the 20% threshold for a market to be considered as affected. The increment from DIC would be marginal, at [0-5]%, with a HHI increment of less than 150.

(168) If the product market for isoindoline pigments were to be further segmented by colour indices, it would be affected only for the colour index PY185, for which the Parties' combined market shares are [40-50]% worldwide (with a [0-5]% increment from DIC). It should be noted that the other colour index within isoindolines, PY139, represents [high percentage] of all isoindoline pigments, and is not affected. As for PY185, the Commission notes that the increment from DIC would be marginal, at [0-5]%, with a HHI increment of less than 150.

219 Form CO, paragraphs 737-740 as well as paragraph 833.
220 Form CO, paragraph 839.
221 Form CO, paragraphs 411 and 412.
222 Form CO, paragraphs 416, 419, 425 and 469.
223 Form CO, paragraphs 477 – 479.
224 Form CO, paragraph 845.
225 Form CO, paragraph 847.

(169) Most importantly, a vast majority of respondents consider that there will remain a sufficient choice of credible isoindoline suppliers post-Transaction,[226] and the majority of customers expected either no impact or a decrease in the price of isoindoline pigments as a result of the Transaction.[227] Similarly, a majority of customers expect either no impact or an increase in the quality, choice and innovation for isoindoline pigments as a result of the Transaction.[228] These elements also hold true at colour index level, as the Commission specifically asked respondents to the market investigation for every question to explain whether their reply would change based on a narrower market definition.

(170) In light of the above, the Commission considers that the Transaction does not raise serious doubts as to its compatibility with the internal market on the market for isoindolines due to non-coordinated horizontal effects, irrespective of whether the relevant product market is considered to be isoindolines as a chemical class, or further segmented by colour indices.

5.4.5. Quinophthalones

(171) Quinophthalones is a chemical class of high-performance organic pigments. It was first synthesised in the 19th century, and made commercially available at a large scale in the 1960s. Quinophthalones are predominantly yellow pigments, and, to a lesser extent orange and brown.

(172) Post-Transaction, the Parties' combined market shares will be [30-40]% worldwide (with a [0-5]% increment from DIC). The Notifying Party's estimates of the Parties' and their largest competitors' market shares for quinophthalones are as follows.

Table 19: Market share estimates for quinophthalones (in 2019, by volume)

Supplier	Worldwide		EEA	
	Volume (kilo tonnes)	Market share	Volume (kilo tonnes)	Supply share
DIC	[...]	[0-5]%	[...]	[0-5]%
BASF	[...]	[30-40]%	[...]	[40-50]%
Combined	**[...]**	**[30-40]%**	**[...]**	**[40-50]%**
Gharda	[...]	[20-30]%	[...]	[10-20]%
Trust Chem	[...]	[10-20]%	[...]	[10-20]%
Vijay/Digichem	[...]	[5-10]%	[...]	[0-5]%
Atul	[...]	[0-5]%	[...]	[0-5]%
Mallak	[...]	[0-5]%	[...]	[0-5]%
Others	*[...]*	*[10-20]%*	*[...]*	*[10-20]%*
Total market	[…]	**100%**	[…]	**100%**

Source: The Parties' sales and RBB competitors' sales and market size estimates.

(173) There is only one colour index within quinophthalones (PY138), so that the Parties' market shares at colour index level are the same as their market shares at chemical class overall.

226 Responses to question 126 of *Q1 – Questionnaire to pigments customers.*
227 Responses to question 127 of *Q1 – Questionnaire to pigments customers.*
228 Responses to question 127 of *Q1 – Questionnaire to pigments customers.*

The Notifying Party's view

(174) In addition to the general arguments (applying to all pigments) summarised in paragraphs (75) - (80) of the present decision, the Notifying Party submits that the increment brought by the Transaction is minimal,[229] that the Parties are facing the competition of several strong Chinese and Indian suppliers, such Gharda, Trust Chem, Vijay-Digichem, Atul and Mallak,[230] and that, as a result of the fierce competition in the quinophthalone market, [...].[231]

(175) In addition, the Notifying Party stresses the fact that [...].[232]

(176) The Notifying Party also points out that part of the competition it faces results from recent entries on the quinophthalone market, such as the entry of Vijay in 2015,[233] and that the quinophthalone market is nowadays characterised by overcapacity.[234]

The Commission's assessment

(177) For the reasons set out in this section, the Commission considers that serious doubts can be excluded for quinophthalone pigments (in case of a product market definition by chemical class, with product differentiation within the product market) as well as for colour indices within the quinophthalone chemical class (in case of a product market definition by colour index).

(178) If the product market for isoindoline pigments was considered at chemical class level, the Parties' combined market shares for quinophthalone pigments would be [30-40]% worldwide, with only a small increment from DIC ([0-5]%). Moreover, account should be taken of the fact that [...]. The same argument also holds true if the product market for quinophthalone pigments was further segmented by colour indices, considering that there is only one colour index within quinophthalones (PY138).

(179) Most importantly, a vast majority of respondents consider that there will remain a sufficient choice of credible quinophthalone suppliers post-Transaction,[235] and the majority of customers expected either no impact or a decrease in the price of quinophthalone pigments as a result of the Transaction.[236] Similarly, a majority of customers expect either no impact or an increase in the quality, choice and innovation for quinophthalone pigments as a result of the Transaction.[237] These elements also hold true at colour index level, as the Commission specifically asked respondents to the market investigation for every question to explain whether their reply would change based on a narrower market definition.

(180) In light of the above, the Commission considers that the Transaction does not raise serious doubts as to its compatibility with the internal market on the market for quinophthalones due to non-coordinated horizontal effects, irrespective of whether the

229 Form CO, paragraphs 737-740 as well as paragraph 867.
230 Form CO, paragraph 880.
231 Form CO, paragraphs 425 and 883.
232 Form CO, paragraphs 868, 876 and 877.
233 Form CO, paragraph 882.
234 Form CO, paragraph 884.
235 Responses to question 150 of *Q1 – Questionnaire to pigments customers.*
236 Responses to question 151 of *Q1 – Questionnaire to pigments customers.*
237 Responses to question 151 of *Q1 – Questionnaire to pigments customers.*

relevant product market is considered to be quinophthalones as a chemical class, or further segmented by colour indices.

5.4.6. Other horizontally affected pigments

(181) The Transaction gives rise to horizontally affected markets with respect to five chemical classes of pigments in addition to the five already assessed in sections 5.4.1 to 5.4.5. These chemical classes, along with the Parties' corresponding market shares, are listed in Table 20 below.

Table 20: Overview of the Parties' market shares for DPP, azo condensation, isoindolinone, pyrazoloquinazolone, and bismuth vanadate (in 2019, by volume)

Chemical class	Worldwide market shares			EEA supply shares		
	DIC	BCE	Combined	DIC	BCE	Combined
DPP*[238]	[0-5]%	[20-30]%	[20-30]%	[0-5]%	[20-30]%	[20-30]%
Azo condensation*	[0-5]%	[20-30]%	[20-30]%	[0-5]%	[30-40]%	[30-40]%
Isoindolinone*	[0-5]%	[30-40]%	[30-40]%	[0-5]%	[30-40]%	[30-40]%
Pyrazoloquinazolone*	[0-5]%	[30-40]%	[30-40]%	[0-5]%	[30-40]%	[30-40]%
Bismuth vanadate°[239]	[0-5]%	[20-30]%	[20-30]%	[0-5]%	[20-30]%	[20-30]%

Source: The Parties' sales and RBB competitors' sales and market size estimates.

(182) [...].

The Notifying Party's view

(183) The Notifying Party considers that the general arguments summarised in paragraphs (75) - (80) of the present decision also apply to the five chemical classes in question.

(184) In addition to these arguments, the Notifying Party submits that **for DPP** pigments, the Chinese competitors are particularly cost efficient, and [...].[240] Moreover, the Notifying Party indicates that after the expiration of the relevant patent in 2014, the average selling price of DPP pigments fell from EUR [...] / kg in 2005 to EUR [...] / kg as of today, and that DPP is as of today a commoditised pigment.[241] Finally, the Notifying Party submits that DIC is an insignificant player with respect to DPP, [...].[242] The Notifying Party also points out that both Parties' customer bases [...].[243] The Notifying Party explains that this provides its customers with countervailing buying power, [...].

(185) **For azo condensation,** the Notifying Party explains that, as for DPP, it is now considered as a commodity and DIC is not an important player, [...].[244] Moreover, the Notifying Party submits that azo pigments are manufactured using raw materials [...]

238 Products market with a * are [...].
239 Products market with a ° are [...].
240 Form CO, paragraph 390.
241 Form CO, paragraphs 409 and 770.
242 Form CO, paragraph 770.
243 Form CO, paragraph 800.
244 Form CO, paragraph 770.

(see paragraph (78) above).[245] In addition the Notifying Party explains that [...],[246] that BCE is facing significant competitive pressure, noticeably from Anshan, […],[247] [...].[248]

(186) **For isoindolinone,** the Notifying Party submits that isoindolinone is among the products [...],[249] that [...],[250] and that the isoindolinone market is characterised by overcapacity.[251]

(187) **For pyrazoloquinazolone,** the Notifying Party does not mention any other argument, either as an addition or as a complement, to the ones summarised in paragraphs (75) - (80) of the present decision, beside the fact that [...] and that the isoindolinone market is characterised by overcapacity.[252]

(188) **For bismuth vanadate pigments,** the Notifying Party submits that that [...].[253] Moreover, the Notifying Party explains that [...], to such an extent that these would now be qualified as commoditised pigments.[254]

The Commission's assessment

(189) For all five chemical classes considered under section 5.4.6, market shares estimates of the Parties, as well as their competitors, allowed the Commission to compute HHI as well as HHI increment estimates in support of its assessment.

(190) **For DPP,** at worldwide level, the Parties' combined market share in the overall market for DPP in 2019 was [20-30]%, with a small increment of [0-5]% from DIC, and a HHI increment of less than 150. The Parties' shares in each of the potential sub-segments are also modest. Moreover, the Commission's assessment should take into account the fact that [...]. Finally, no material concerns were raised in the course of the market investigation regarding the Parties' horizontal overlap in DPP. In light of the above, the Commission considers that the Transaction does not raise serious doubts as to its compatibility with the internal market due to non-coordinated horizontal effects in relation to the market for DPP.

(191) **For azo condensation,** at worldwide level, the Parties' combined market share in the overall market for azo condensation in 2019 was [20-30]%, with a negligible increment of [0-5]% from DIC, and a HHI increment of less than 150. The Parties' shares in each of the potential sub-segments are also modest. Moreover, the Commission's assessment should take into account the fact that [...]. Finally, no material concerns were raised in the course of the market investigation regarding the Parties' horizontal overlap in azo condensation. In light of the above, the Commission considers that the Transaction does not raise serious doubts as to its compatibility with

245 Form CO, paragraph 395.
246 Form CO, paragraph 738.
247 Form CO, paragraphs 416 and 419.
248 Form CO, parahraph 425.
249 Form CO, paragraph 420. See also Annex A of Form CO, paragraph 24.
250 Form CO, paragraph 738. See also Annex A of Form CO, paragraph 13.
251 Annex A of Form CO, paragraph 25.
252 Annex A of Form CO, paragraph 35.
253 Form CO, paragraph 738. See also Annex A of Form CO, paragraph 59.
254 Annex A of Form CO, paragraph 66.

the internal market due to non-coordinated horizontal effects in relation to the market for azo condensation.

(192) **For isoindolinone,** at worldwide level, the Parties' combined market share in the overall market for isoindolinone in 2019 was [30-40]%, with a small increment of [0-5]% from DIC, and a HHI increment of less than 150. The Parties' shares in each of the potential sub-segments are also modest. Moreover, the Commission's assessment should take into account the fact that [...]. Finally, no material concerns were raised in the course of the market investigation regarding the Parties' horizontal overlap in isoindolinone. In light of the above, the Commission considers that the Transaction does not raise serious doubts as to its compatibility with the internal market due to non-coordinated horizontal effects in relation to the market for isoindolinone.

(193) **For pyrazoloquinazolone,** at worldwide level, the Parties' combined market share in the overall market for pyrazoloquinazolone in 2019 was [30-40]%, with a small increment of [0-5]% from DIC, and a HHI increment just above 150 ([150-160]). The Parties' shares in each of the potential sub-segments are also modest. Moreover, the Commission's assessment should take into account the fact that [...], DIC is likely to have a market power even lower than suggested by its (already modest) market shares. Finally, no material concerns were raised in the course of the market investigation regarding the Parties' horizontal overlap in pyrazoloquinazolone. In light of the above, the Commission considers that the Transaction does not raise serious doubts as to its compatibility with the internal market due to non-coordinated horizontal effects in relation to the market for pyrazoloquinazolone.

(194) **For bismuth vanadate pigments,** at worldwide level, the Parties' combined market share in the overall market for bismuth vanadate pigments in 2019 was [20-30]%, with a negligible increment of [0-5]% from DIC, and a HHI increment of less than 150. At EEA level, the Parties' combined market share in the overall market for bismuth vanadate pigments in 2019 was [20-30]%, with a negligible increment of [0-5]% from DIC, and a HHI increment of less than 150. The Parties' shares in each of the potential sub-segments are also modest. Moreover, the Commission's assessment should take into account the fact that [...], DIC is likely to have a market power even lower than suggested by its (already modest) market shares at both EEA and worldwide level. Finally, no material concerns were raised in the course of the market investigation regarding the Parties' horizontal overlap in bismuth vanadate pigments. In light of the above, the Commission considers that the Transaction does not raise serious doubts as to its compatibility with the internal market due to non-coordinated horizontal effects in relation to the market for bismuth vanadate pigments.

5.5. Competitive assessment of the vertical relationships

5.5.1. Pigments (upstream) with printing inks (downstream)

(195) Both Parties are active in the manufacture of pigments. Only DIC is active in the manufacture of printing inks. The link is vertically affected because the Parties' combined market shares in the sales of certain pigments (namely perylenes, quinacridones, pyrazoloquinazolone, isoindolinone, quinophthalone, azo condensation, bismuth vanadate and DPP) and certain colour indexes are above 30% (see Section 5.4 above).

(196) The Notifying Party's estimates of DIC's market shares for printing inks (and potential sub-segments) worldwide and in the EEA are as follows:

Table 21: DIC's market share estimates for printing inks (in 2019, by volume)

Physical property of the ink	Sub-segment	Worldwide		EEA	
		Volume (tonnes)	Market share	Volume (tonnes)	Supply share
Liquid inks	Flexographic inks	[...]	[20-30]%	[...]	[20-30]%
	Gravure inks	[...]	[20-30]%	[...]	[30-40]%
	Jet inks	[...]	[5-10]%	[...]	[10-20]%
Liquid inks overall		**[...]**	**[20-30]%**	**[...]**	**[20-30]%**
Paste inks	Coldest inks	[...]	[20-30]%	[...]	[20-30]%
	Heatset inks	[...]	[20-30]%	[...]	[20-30]%
	Sheetfed inks	[...]	[10-20]%	[...]	[10-20]%
Paste inks overall		**[...]**	**[10-20]%**	**[...]**	**[20-30]%**
Inks overall		**[...]**	**[20-30]%**	**[...]**	**[20-30]%**

Source: The Parties' sales and RBB competitors' sales and market size estimates.

The Notifying Party's view

(197) The Notifying Party submits that there is no risk of input foreclosure given that, for any pigment class where the Parties' market shares is above 30% either at EEA or worldwide level (namely perylenes, quinacridones, pyrazoloquinazolone, isoindolinone, quinophthalone, azo condensation, bismuth vanadate and DPP), there are alternative manufacturers from which ink producers could source their needs.[255] The Notifying Party also explains that these affected pigment classes only represent [small percentage] in volume of all of DIC's sales of pigments to printing inks manufacturers, and [small percentage] in volume of all BCE's sales of pigments to printing inks manufacturers, while the bulk of these sales is made of phthalocyanine pigments[256] and azo pigments[257], for which the Parties' combined market shares are below the 30% threshold.

(198) The Notifying further explains that for the pigment classes where the Parties' market shares is above 30%, the overcapacity at worldwide level ranges from [less than 20]% to [high percentage], and that for these pigment classes, the Indian and Chinese capacity could satisfy from a third to 80% of the worldwide demand, depending on the pigment.[258] Finally, as explained with respect to the horizontal overlaps between the Parties' activities, the Notifying Party considers that different chemical classes within the same colour space exert competitive pressure on each other, so that if the combined entity were to engage in an input foreclosure strategy with respect to some pigment chemistries where they hold a strong position, printing ink manufacturers could switch to alternative chemistries (within the same colour class) where the Parties are weaker.[259]

255 Form CO, paragraph 994.

256 Phthalocyanine pigments represent [40-50]% in volume of all of DIC's sales of pigments to printing inks manufacturers, and [50-60]% in volume of all of BCE's sales of pigments to printing inks manufacturers.

257 Azo pigments represent [40-50]% in volume of all of DIC's sales of pigments to printing inks manufacturers, and [10-20]% in volume of all of BCE's sales of pigments to printing inks manufacturers.

258 Form CO, paragraph 995.

259 Form CO, paragraph 996.

(199) The Notifying Party also submits that there is no risk of customer foreclosure given DIC's reasonable market shares downstream (except in gravure liquid inks), as well as the fact that colourants have multiple uses other than the manufacture of printing inks, so that colourant manufacturers have multiple customers outside the printing industry.[260]

The Commission's assessment

(200) **As regards a potential input foreclosure strategy,** the Commission first notes that the Parties' ability to put in place such an input foreclosure strategy should be put into perspective in light of the significance of resales between pigments competitors in the industry, as is evidenced by the significant number of purchases, resales and even contractual relationships among pigment manufacturers.[261] This is also evidenced by the fact that for five classes of pigments among the ten chemical classes that are affected as a result of the Transaction, [...] (see Table 20 above). The relatively high number of pigment distributors active on the market[262] further enriches the picture, to such an extent that customers are often not aware of whether the pigment they purchase from a given supplier was actually manufactured by that supplier or not. As an illustration, only a small minority of customers that responded to questions regarding quinophthalones were aware of the fact that [...].[263] For all these reasons, it appears unlikely that the Parties would have the ability to put in place a foreclosure strategy that would enable them to target printing ink manufacturers specifically, because any product they sell to a distributor or a competitor, as a result of a supply agreement for instance, might end up eventually being sold to any end-customer, including printing ink manufacturers.

(201) Moreover, the Commission notes that given the worldwide nature of the market for pigments, the Parties would most likely lack the ability to put in place such an input foreclosure strategy for any pigment for which their combined market share worldwide is lower than 30%. This leaves only perylenes, quinophthalones, isoindolinones and pyrazoloquinazolone, as well as some colour indices within these chemical classes, as potential candidates for input foreclosure. These represent only four chemical classes out of over twenty, and, as the Notifying Party sets out, less than [small percentage] in volume of all of DIC's sales of pigments to printing inks manufacturers, and [small percentage] in volume of all BCE's sales of pigments to printing inks manufacturers (see paragraph (195) above). As such, the Parties would therefore assuredly lack the ability to foreclose access to all pigments that are used as an input for the manufacture of printing inks.

(202) Most importantly, even for pigment classes where the Parties' combined market share level is above 30% at worldwide level, a majority of printing inks manufacturers that expressed a view consider that there would remain sufficient sources of pigments for them to manufacture printing inks if the combined entity decided to stop supplying this input product to them.[264]

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260 Form CO, paragraphs 997-1 001.

261 Responses to question 2 of *Q2 – Questionnaire to pigments competitors.*

262 Responses to question 1 of *Q1 – Questionnaire to pigments customers.*

263 Responses to questions 129 – 152 of *Q1 – Questionnaire to pigments customers.*

264 Responses to question 21 of *Q3 – Questionnaire to inks competitors.*

(203) For the reasons set out above, the Commission concludes that the Parties would lack the ability to foreclose access to pigments as an input for the manufacture of printing inks.

(204) As regards incentive and effects of a potential input foreclosure strategy, it is not necessary for the Commission to conclude on whether the Parties would have an incentive to engage in a potential input foreclosure strategy aiming at foreclosing access to pigments or whether such a foreclosure strategy would have effects, as the lack of ability would already prevent the Parties to engage in such a potential foreclosure strategy in the first place.

(205) **As regards potential customer foreclosure,** the Commission first notes that DIC's ability to engage in such a foreclosure strategy does not change because of the Transaction, since only DIC is active in the manufacture of printing inks. It is recalled that DIC's market share in printing inks overall is moderate (below the 30% threshold), and only exceeds the 30% threshold for gravure inks in the EEA. However, the potential sub-divisions of printing inks do not appear to be relevant for the analysis of potential customer foreclosure, given that all pigments are suited to be used in all types of printing inks and that the manufacture of different types of printing inks do not require significantly different amounts of pigments. Therefore, any upstream competitor of the Parties in the market for pigments would likely be indifferent to whether DIC is stronger in the production of certain types of printing inks rather than others, because their main interest with respect to potential customer foreclosure would be whether DIC is an important buyer of pigments for the manufacture of inks overall. In a similar way, the fact that DIC's market share for printing inks exceed the 30% threshold only for gravure inks in the EEA, but not at worldwide level does not appear to be relevant in the context of the analysis of potential customer foreclosure, given the worldwide nature of the market for pigments. Therefore, any upstream competitor of the Parties in the market for pigments would likely be indifferent to whether DIC is stronger in the production of printing inks in certain geographic areas rather than others, because their main interest with respect to potential customer foreclosure would be whether DIC is an important buyer of pigments at worldwide level for the manufacture of inks overall.

(206) As a consequence, the most relevant metric to assess the Parties' ability to foreclose access to DIC as a customer for pigments for the manufacture of printing inks appears to be DIC's market share in printing inks overall, at worldwide level, insofar as this market share is indicative of DIC's importance as a purchaser of pigments for the manufacture of inks. This market share being relatively low ([20-30]%), it would therefore appear unlikely that the Parties would have the ability to foreclose access to DIC as a customer for pigments for the manufacture of printing inks.

(207) This is even more the case in view of the fact that DIC's market share downstream in the manufacture of printing inks overall, at worldwide level actually provide an over-estimated indication of DIC's importance as a purchaser of pigments for the manufacture of inks, given that DIC is already at least partially vertically integrated with respect to its needs for pigments in the manufacture of inks, and that part of the pigments used in the manufacture of that [...]. Finally, pigments have a number of uses other than the manufacture of inks, which is an additional reason why DIC's market share downstream in the manufacture of printing inks overall, at worldwide level actually provide an over-estimated indication of DIC's importance as a purchaser of pigments overall.

(208) For the reasons set out above, the Commission concludes that the Parties would lack the ability to foreclose access to DIC as a customer for pigments for the manufacture of printing inks.

(209) As regards incentive and effects of a potential customer foreclosure strategy, it is not necessary for the Commission to conclude on whether the Parties would have an incentive to engage in a potential customer foreclosure strategy aiming at foreclosing access to DIC as a pigment customer active in the manufacture of inks, or whether such a foreclosure strategy would have effects, as the lack of ability would already prevent the Parties to engage in such a potential foreclosure strategy in the first place.

(210) In light of the above, taking account of the results on the market investigation and of all the evidence available to it, the Commission considers that the Transaction does not raise serious doubts as to its compatibility with the internal market in relation to the vertical link between pigments (upstream) and printing inks (downstream).

6. PROPOSED REMEDIES

6.1. Framework for the assessment of the commitments

(211) Where a concentration raises serious doubts as regards its compatibility with the internal market, the merging parties may undertake to modify the concentration to remove the grounds for the serious doubts identified by the Commission. Pursuant to Article 6(2) of the Merger Regulation, where the Commission finds that, following modification by the undertakings concerned, a notified concentration no longer raises serious doubts, it shall declare the concentration compatible with the internal market pursuant to Article 6(1)(b) of the Merger Regulation.

(212) As set out in the Commission Notice on remedies acceptable under Council Regulation (EC) No 139/2004 and under Commission Regulation (EC) No 802/2004 (the "Remedies Notice"),[265] the commitments have to eliminate the competition concerns entirely, and have to be comprehensive and effective from all points of view.[266]

(213) In assessing whether commitments will maintain effective competition, the Commission considers all relevant factors, including the type, scale and scope of the proposed commitments, with reference to the structure and particular characteristics of the market in which the transaction is likely to significantly impede effective competition, including the position of the parties and other participants on the market.[267]

(214) In order for the commitments to comply with those principles, they must be capable of being implemented effectively within a short period of time. Concerning the form of acceptable commitments, the Merger Regulation gives discretion to the Commission as long as the commitments meet the requisite standard. Structural commitments will meet the conditions set out above only in so far as the Commission is able to conclude with the requisite degree of certainty, at the time of its decision,

265 OJ C 267, 22.10.2008, p. 1.

266 Paragraph 9 of the Remedies Notice.

267 Paragraph 12 of the Remedies Notice.

that it will be possible to implement them, and that it will be likely that the new commercial structures resulting from them will be sufficiently workable and lasting to ensure that serious doubts are removed.[268] Divestiture commitments are normally the best way to eliminate competition concerns resulting from horizontal overlaps.

6.2. Proposed commitments

(215) On 16 November 2020, the Notifying Party submitted a set of commitments under Article 6(2) of the Merger Regulation (the "**Initial Commitments**"), in order to render the concentration compatible with the internal market.

(216) The Commission market tested the Initial Commitments to assess whether they are sufficient and suitable to remove the serious doubts identified in Section 5 of this decision. The feedback received from customers and competitors during the market test confirmed that the Initial Commitments could in principle remedy the serious doubts identified by the Commission, subject to modifications to address a number of specific issues described below in Section 6.2.2 of this decision. On 3 December 2020, the Parties submitted revised Commitments under Article 6(2) of the Merger Regulation (the "**Final Commitments**") that aim to address the issues identified by the Commission.

6.2.1. Description of the Initial Commitments

(217) In order to address the competition concerns identified by the Commission and render the Transaction compatible with the internal market, the Notifying Party submitted commitments consisting of the divestiture to a suitable purchaser (the "**Purchaser**") of DIC's manufacturing facility located in Bushy Park (US) (the "**Divestment Business**").

(218) The Commitments provide for a so-called "upfront buyer provision" pursuant to which the Transaction cannot be implemented before the Notifying Party has entered into a final binding sale and purchase agreement for the sale of the Divestment Business and the Commission has approved the Purchaser and the terms of sale. The Purchaser shall be an industry participant with experience in the pigment or colourants business.

6.2.1.1. Scope of the Divestment Business

(219) The Divestment Business consists of DIC's global business for:

(a) the **Divestment Products**, comprising of

(i) Perylene pigment products under the colour indices PR179, PV29, PR123, PR190 and PR224 manufactured at the Bushy Park Facility and sold by DIC globally ("**Bushy Park Perylene Products**");

(ii) Quinacridone pigment products under the colour indices PR122, PR202, PV19 and PV55 manufactured at the Bushy Park Facility and sold by DIC globally ("**Bushy Park Quinacridone Products**");

268 Paragraph 10 of the Remedies Notice.

(b) the **Bushy Park Other Products**, comprising of

(i) Isoindoline (colour index PY139);

(ii) Azo (colour index PR188); and

(iii) Carbon Black (PBl7) pigment products

manufactured at the Bushy Park Facility and sold by DIC globally ("**Bushy Park Other Products**");

(220) The Divestment Business will contain the following tangible assets:

(a) the **Bushy Park Facility**, including, but not limited to:

- all tangible manufacturing assets owned by DIC, regardless of location, used to manufacture or contributing to the manufacture of the Divestment Products and the Bushy Park Other Products in the Bushy Park Facility, [...];

- the real estate owned by DIC and housing, the tangible manufacturing assets used for the manufacturing of the Divestment Products and the Bushy Park Other Products, as well as the related ground leases at the Bushy Park Facility;

(b) any inventory of Divestment Products and Bushy Park Other Products, raw materials used in the production of the Divestment Products and Bushy Park Other Products, and the Divestment Products and Bushy Park Other Products;

(c) the transfer of all advertising, marketing, sales, publicity and presentational materials designed for and used in connection with the Divestment Products and Bushy Park Other Products, or copies of any such materials designed for and used in connection with the Divestment Products and Bushy Park Other Products for a time period to be agreed by DIC and the Purchaser, subject to reprinting the Purchaser's name, and any copyrights owned by DIC in such materials;

(221) The Divestment Business will contain the following intangible assets:

(a) the assignment of all of DIC's know-how and intellectual property rights, if any, that is used by DIC exclusively or primarily to develop, manufacture, test, market the Divestment Products and Bushy Park Other Products at the Bushy Park Facility,

(b) an indefinite, royalty-free, irrevocable, non-exclusive, global license under DIC's other intellectual property rights, if any, to use all know-how and other intellectual property rights not exclusively or primarily used by DIC to develop, manufacture, test, market the Divestment Products and Bushy Park Other Products at the Bushy Park Facility;

(c) to the extent it concerns solely or predominantly the Divestment Products or the Bushy Park Other Products, the Parties shall transfer all R&D and pipeline projects and related information existing at the Effective Date to the Purchaser. To the extent they do not concern solely or predominantly the Divestment Products or the Bushy Park Other Products, the Parties will provide a royalty-

free, irrevocable, non-exclusive, global license to these R&D and pipeline projects;

(d) all historic production and quality control data gathered by DIC and held by DIC of the Divestment Products and Bushy Park Other Products and historic records on compliance with applicable regulations; provided, however, that any parts of such records that do not relate to the Divestment Products and Bushy Park Other Products may be redacted from the records delivered to the Purchaser;

(e) the Quindo™ and Perrindo™ brand and any associated trademarks and product names;

(f) at the option of the Purchaser, a transitional, non-exclusive, royalty-free licence for the trademarks SunPlast™, SunBrite™ and Fanchon™ for a transitional period up to [...].

(222) The Divestment Business will contain the following contracts, agreements, commitments and understandings:

(a) where applicable, and to the extent contractually possible, the transfer of any supply arrangement, customer contracts, contract rights, commitments, and customer orders of the Divestment Products and Bushy Park Other Products which contribute to the current operation or are necessary to ensure the viability and competitiveness of the Divestment Business and all related prepayments, prepaid expenses, credits, etc.; for contracts that are legally not transferable (if any), DIC will undertake its best efforts to novate written contracts for the supply of the Divestment Products; DIC will take commercially reasonable steps to encourage Customers to move their Divestment Products and Bushy Park Other Products purchasing volumes to the Purchaser;

(b) where applicable, and to the extent contractually possible, the transfer of any contracts, agreements commitments and understandings with the Divestment Business' suppliers for the period of time between 2015 and closing;

(c) for the contracts where DIC will be a counterparty, DIC commits to give the option to the Purchaser [...].

(223) The Divestment Business will include the following customer, credit and other records:

(a) the transfer of a list of all customers for the Divestment Products and Bushy Park Other Products, including pending contacts or negotiations with potential new Customers, provided, however, that DIC may continue to use such lists to the extent they relate to its retained businesses;

(b) where applicable, the transfer of any customer records and transactional data which contribute to the current operation or are necessary to ensure the viability and competitiveness of the Divestment Business, provided, however, that DIC may continue to use such records and transactional data to the extent they relate to its retained businesses; and provided further, that any parts of such documentation that do not relate to the Divestment Business may be redacted from the versions delivered to the Purchaser; and provided further,

that to the extent that DIC is obliged to retain such documents in support of legal obligations, DIC shall be entitled to do so; and, provided further, that DIC shall not be required to transfer any such customer records and transactional data that do not relate to the Divestment Business; where third-party consent is required for customer documentation to be transferred, DIC undertakes to make all best efforts to obtain such consent;

(c) a list of all current suppliers of raw materials for the production of the Divestment Products and Bushy Park Other Products.

(224) The Divestment Business includes the relevant personnel, i.e. [...] employees, currently employed at the Bushy Park Facility to the extent engaged in operations relating to the Divestment Products, subject to employee consent and applicable labour laws and other relevant legislation, that are necessary to ensure the viability and competitiveness of the Divestment Business.

(225) The Divestment Business includes, to the extent transferable, all licences, permits and authorisations specific to the Bushy Park Facility which contribute to the current operation or are necessary to ensure the viability and competitiveness of the Divestment Business.

6.2.1.2. Other elements of the Initial Commitments

(226) To reinforce the structural effect of the Initial Commitments, the Notifying Party commits not to reacquire influence over the Divestment Business for a period of [...] as from Closing.

(227) Furthermore, with the aim of ensuring a smooth transfer of the Divestment Business, the Notifying Party committed to provide transitional services (the "**Transitional Services Agreement**"), for a period of up to [...] after Closing at [...], extendable for [...], for the supply of services necessary for the viability and competitiveness of the Divestment Business to the Purchaser. The transitional services include, subject to the Purchaser's requirements, IT, HR and payroll, finance, purchasing, supply chain, customer service, treasury, regulatory, EHS, IP, insurance services and tax.

(228) The Initial Commitments also provide that the Notifying Party should enter into related commitments, *inter alia* regarding the separation of the Divestment Business from its retained businesses, the preservation of the viability, marketability and competitiveness of the Divestment Business, including the appointment of a monitoring trustee and, if necessary, a divestiture trustee.

6.2.1.3. Notifying Party's views

(229) The Notifying Party argues that the Initial Commitments would eliminate the Commission's serious doubts as to the compatibility of the Transaction with the internal market. In particular, the Notifying Party is of the view that:

(a) The Initial Commitments would address the Commission's concerns as they: (i) remove the large majority of the overlap between the Parties for all perylene pigments (ii) remove the large majority of the overlap between the Parties quinacridone colour index PR202;

(b) The Divestment Business is comprehensive and effective, allowing the Purchaser to compete effectively in the relevant markets on a lasting basis; and

(c) The other elements of the Initial Commitments ensure that the Commitments are capable of being implemented effectively within a short period of time.

6.2.2. Assessment of the Initial Commitments

(230) The Commission conducted a market test of the Initial Commitments to investigate the scope and effectiveness of the Commitments, the viability and competitiveness of the Divestment Business, and the appropriateness of the Purchaser Requirements. The Commission's assessment of each of these elements in light of the results of the market test is as follows.

6.2.2.1. Suitability of the Initial Commitments to remove serious doubts

(231) As explained in Section 5 above, the Commission finds that the Transaction gives rise to serious doubts as to the compatibility of the concentration with the internal market in respect of each of: (i) perylene pigments overall and specifically perylene pigments colour indices PR179 and PV29, and (ii) quinacridone pigment colour index PR202.

(232) For each pigment, the Initial Commitments entail the divestment of (at least) the vast majority of the overlap in the markets in which serious doubts result from the Transaction. The Initial Commitments would therefore ensure that in each of these markets the Transaction maintains effective competition at the level in effect pre-Transaction. More specifically:

(a) For perylenes overall, the Divestment Business comprises a volume of [...], with a value of EUR [...] in 2019. This represents almost the entirety ([high percentage]) of DIC's sales of perylenes, and therefore removes almost the entire overlap between the Parties. [...].

(b) For PR179, the Divestment Business comprises a volume of [...] with a value of [...] in 2019. This represent almost the entirety ([high percentage]) of DIC's sales of PR179, and therefore removes almost the entire overlap between the Parties. [...].

(c) For PV29, the Divestment Business comprises a volume of [...], with a value of EUR [...] in 2019. This represents the entirety of DIC's sales of PV29, and therefore removes entire overlap between the Parties. [...].

(d) For PR202, the Divestment Business comprises a volume of [...] with a value of EUR [...] in 2019. This represent almost the entirety ([high percentage]) of DIC's sales of PR202, and therefore removes almost the entire overlap between the Parties.

(233) The market test confirmed the suitability of the Initial Commitments to address the Commission's serious doubts.

(234) The vast majority of customers and competitors that expressed a view considered that the Initial Commitments are suitable to effectively remove the competitive concerns

relating to the overall perylenes' market, [269] as well as for the markets for perylene colour indexes PR179[270] and PV29[271] and for quinacridone colour index PR202 [272].

(235) Responses of competitors of the Parties, overall indicate that the Initial Commitments contain all the necessary tangible and intangible assets to restore effective competition in all markets under consideration and that Bushy Park is considered as an efficient and cost competitive facility.[273]

6.2.2.2. Viability and competitiveness of the Divestment Business

(236) Customers overwhelmingly indicate that the Divestment Business constitutes an effective setup allowing for the emergence of a viable alternative supplier for customers[274] for perylenes overall, as well as for perylene colour indexes PR179 and PV29 and for quinacridone colour index PR202. They also confirm to a great extent that the Divestment Business is likely to retain the current customers of DIC served from Bushy Park for all of these products.[275] Moreover, the majority of customers of the Divestment Business indicated that the change of ownership of the Divestment Business would not force them to requalify the products they procure from the Divestment Business.[276] Among the customers who mentioned that they would have to requalify the products they procure from the Divestment Business, the vast majority nonetheless indicated that they were either very likely, or likely to do so.[277] In the same vein, customers of DIC, BCE or both, indicated to a great extent that they would consider the Divestment Business as a suitable alternative supplier to the merged entity DIC/BCE, [278] but also that the Divestment Business is likely to find suitable new customers to sell its products to.[279]

(237) However, the Commission notes that some respondents indicated that additional assets[280] would need to be included in the Divestment Business assets because they are deemed necessary to ensure the viability of the divestment business. These include innovations / development products,[281] as well as personnel which is not transferred with the Divestment Business under the text of the Initial Commitments,[282] such as personnel exclusively or predominantly involved in the sales of, or with production and management expertise in, the products of the Divestment Business. Additionally,

269 See question 2, Questionnaire R1 Market test to pigments customers and question 2 Questionnaire R2 Market test to pigments competitors.
270 See question 3, Questionnaire R1 Market test to pigments customers and question 3 Questionnaire R2 Market test to pigments competitors.
271 See question 4, Questionnaire R1 Market test to pigments customers and question 4 Questionnaire R2 Market test to pigments competitors.
272 See question 5, Questionnaire R1 Market test to pigments customers and question 5 Questionnaire R2 Market test to pigments competitors.
273 See questions 6 - 15, Questionnaire R2 Market test to pigments competitors.
274 See questions 6-9, Questionnaire R1 Market test to pigments customers.
275 See questions 10-13, Questionnaire R1 Market test to pigments customers.
276 See question 15, Questionnaire R1 Market test to pigments customers.
277 See question 15.1 Questionnaire R1 Market test to pigments customers.
278 See question 17 Questionnaire R1 Market test to pigments customers.
279 See question 18 Questionnaire R1 Market test to pigments customers.
280 See question 8, Questionnaire R2 Market test to pigments competitors.
281 See questions 8 & 9, Questionnaire R2 Market test to pigments competitors.
282 See questions 8, 12 & 13, Questionnaire R2 Market test to pigments competitors.

the market test indicated[283] that a broadening of the scope of the intangible assets transferred to the Divestment Business (customer records, licencing agreements) would be necessary. Finally, competitors indicated that a broadening of the scope and of the services included in the Transitional Services Agreement would be necessary as well. [284]

6.2.2.3. Purchaser Requirements and potential purchasers

(238) Customers and competitors clearly indicated that the purchaser criteria were sufficient to guarantee that the Divestment Business would attract credible purchasers.[285] However, both customers and competitors strongly opposed[286] the idea that a potential buyer could have experience only in colourants but not in pigments (see paragraph (216) above).

6.2.2.4. Conclusion on the Initial Commitments

(239) In light of the above, the Commission informed the Notifying Party that the Initial Commitments needed to be improved along the lines described above, in order to be considered adequate in scope and suitable to address the serious doubts the Transaction would otherwise give rise to, and to ensure that the Divestment Business will be an effective competitor for each of the relevant markets in the hands of a suitable Purchaser.

6.2.3. Description of the Final Commitments

(240) In response to the Commission's feedback regarding the outcome of the market test and its preliminary assessment, the Parties submitted the Final Commitments on 3 December 2020. The Final Commitments represent an amended version of the Initial Commitments, with the following changes.[287]

(241) The customer records and transactional data pertaining to the Divestment Business provided to the purchaser shall cover the time period from [...] to present, instead of only from [...] to present, as was provided by the Initial Commitments. In addition this information will be extended to "potential new *or targeted*" customers (instead of only *"*potential new customers*"*). In a similar fashion, the transfer to the purchaser of contracts, agreements, commitments and understandings with the Divestment Business' suppliers will be extended to cover the time period from [...] to present, instead of only from [...] to present as was provided by the Initial Commitments.

(242) The transitional, non-exclusive, royalty-free licence for the trademarks SunPlast™, SunBrite™ and Fanchon™ will be offered to the purchaser for a period […]* [...], extendable for [...], instead of [...] as initially foreseen.

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283 See questions 8 & 15, Questionnaire R2 Market test to pigments competitors.

284 See questions 24 & 25, Questionnaire R2 Market test to pigments competitors.

285 See questions 19 & 21 Questionnaire R1 Market test to pigments customers and questions 19 & 22, Questionnaire R2 Market test to pigments competitors.

286 See question 22 Questionnaire R1 Market test to pigments customers and question 23, Questionnaire R2 Market test to pigments competitors.

287 The Final Commitments also included certain clarifications and other modifications that are not of major significance and are not discussed in this decision.

* Should read: "of"

(243) The non-solicit clause was extended to all of the personnel being transferred to the Divestment Business (instead of being applicable to Key Personnel only), and its duration was extended to [...] after closing (instead of [...]).

(244) As regards the transferred personnel, the Final Commitments provide that it shall also include (i) any sales personnel predominantly or entirely dedicated to the Divestment Business, even if not working in the Bushy Park Facility and (ii) any product management and product expert roles predominantly or exclusively dedicated the Divestment business.

(245) The suitable purchaser criterion in the Final Commitments now excludes industry participants with experience in colourants but not in pigments. Therefore only industry participants with experience in the pigment business can be considered as a suitable purchaser.

(246) Innovations and development products shall be transferred along with R&D pipeline projects.

(247) The Transitional Services Agreement shall cover in addition (i) sales & marketing support and (ii) technical services (e.g. product experts and product management). Moreover, it was clarified that with respect to supply chain considerations, the Transitional Services Agreement shall cover among other warehousing and logistics.

(248) DIC proposes to include the entire water management facilities[288] which belong to DIC and are adjacent to the Divestment Business within the scope of the Divestment Business.

(249) All of these changes have been incorporated into and form an integral part of the Final Commitments annexed to this decision.

6.2.4. Assessment and conclusion on the Final Commitments

(250) The amendments introduced by the Parties into the Final Commitments resolve all of the concerns raised in the course of the market testing of the Initial Commitments. Accordingly, based on the information available to it, the Commission is satisfied that the Final Commitments are capable of eliminating the competition concerns entirely; are comprehensive and effective from all points of view; proportionate; and capable of being implemented effectively within a short period of time.

(251) In particular, for the reasons outlined above, and in view of the results of the market test, the Commission concludes that the Final Commitments entered into by the undertakings concerned and as submitted to the Commission on 3 December 2020 are sufficient to eliminate the serious doubts as to the compatibility of the concentration with the internal market in respect of each of: (i) perylene pigments overall and specifically perylene pigments colour indices PR179 and PV29, and (ii) quinacridone pigment colour index PR202.

6.3. Conclusion on remedies

(252) Under the first sentence of the second subparagraph of Article 6(2) of the Merger Regulation, the Commission may attach to its decision conditions and obligations

288 Including a [...].

intended to ensure that the undertakings concerned comply with the commitments they have entered into vis-à-vis the Commission with a view to rendering a notified concentration compatible with the internal market.

(253) The achievement of the measure that gives rise to the structural change of the market is a condition, whereas the implementing steps which are necessary to achieve this result are generally obligations on the Parties. Where a condition is not fulfilled, the Commission's decision declaring the concentration compatible with the internal market no longer stands. Where the undertakings concerned commit a breach of an obligation, the Commission may revoke the clearance decision in accordance with Article 8(6) of the Merger Regulation. The undertakings concerned may also be subject to fines and periodic penalty payments under Articles 14(2) and 15(1) of the Merger Regulation.

(254) In accordance with the distinction described in the previous paragraph, the decision in this case is conditioned on the full compliance with the requirements set out in Section B of the Final Commitments (including the Schedule), which constitute conditions. The remaining requirements set out in the other Sections of the Final Commitments constitute obligations, as they concern the implementing steps that are necessary to achieve the modifications sought in a manner compatible with the internal market.

(255) The full text of the Final Commitments is annexed to this decision and forms an integral part thereof.

7. CONCLUSION

(256) For the above reasons, the Commission has decided not to oppose the notified operation as modified by the commitments and to declare it compatible with the internal market and with the functioning of the EEA Agreement, subject to full compliance with the conditions in Section B (including the Schedule) of the Commitments annexed to the present decision and with the obligations contained in the other sections of the said commitments. This decision is adopted in application of Article 6(1)(b) in conjunction with Article 6(2) of the Merger Regulation and Article 57 of the EEA Agreement.

For the Commission

(Signed)
Margrethe VESTAGER
Executive Vice-President

COMMITMENTS TO THE EUROPEAN COMMISSION

CASE COMP/M.9677 – DIC / BASF COLORS & EFFECTS

3 December 2020

Pursuant to Article 6(2) of Council Regulation (EC) No 139/2004 (the "**Merger Regulation**"), DIC Corporation ("**DIC**" or the "**Notifying Party**") hereby enters into the following Commitments (the "**Commitments**") vis-à-vis the European Commission (the "**Commission**") with a view to rendering the acquisition of BASF Colors & Effects ("**BCE**") by DIC (the "**Concentration**") compatible with the internal market and the functioning of the EEA Agreement.

This text shall be interpreted in light of the Commission's decision pursuant to Article 6(1)(b) of the Merger Regulation to declare the Concentration compatible with the internal market and the functioning of the EEA Agreement (the "**Decision**"), in the general framework of European Union law, in particular in light of the Merger Regulation, and by reference to the Commission Notice on remedies acceptable under Council Regulation (EC) No 139/2004 and under Commission Regulation (EC) No 802/2004 (the "**Remedies Notice**").

[…].

SECTION A DEFINITIONS

1. For the purpose of the Commitments, the following terms shall have the following meaning:

Affiliated Undertakings: undertakings controlled by the Parties and/or by the ultimate parents of the Parties, whereby the notion of control shall be interpreted pursuant to Article 3 of the Merger Regulation and in light of the Commission Consolidated Jurisdictional Notice under Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings (the "**Consolidated Jurisdictional Notice**").

Assets: the assets that contribute to the current operation or are necessary to ensure the viability and competitiveness of the Divestment Business as indicated in Section B, paragraph 6 and described more in detail in the Schedule.

BCE: BASF Colors & Effects, a group of companies and selected assets jointly constituting BASF SE's global pigment business and which is the target of the Concentration (precise scope of the target described in **Annex 5** to the Form CO).

Bushy Park Other Products: isoindoline (C.I. P.Y.139), azo (C.I. P.R.188) and carbon black (C.I. P.Bl.7) pigment products manufactured at the Bushy Park Facility and sold by DIC globally (in order of appearance each individually referred to as the "**Bushy Park Isoindoline Products**", "**Bushy Park Azo Products**" and the "**Bushy Park Carbon Black Products**").

Bushy Park Facility: Sun Chemical's pigment manufacturing facility located at 1506 Bushy Park Road, Goose Creek, SC 29445, South Carolina, U.S.

C.I.: Colour Index.

Closing: the transfer of the legal title to the Divestment Business to the Purchaser.

Closing Period: the period of […] from the approval of the Purchaser and the terms of sale by the Commission.

Confidential Information: any business secrets, know-how, commercial information, or any other information of a proprietary nature that is not in the public domain.

Conflict of Interest: any conflict of interest that impairs the Trustee's objectivity and independence in discharging its duties under the Commitments.

Customers: DIC's customers that have purchased the Divestment Products and the Bushy Park Other Products from DIC at any time between 2010 and the Closing.

DIC: DIC Corporation, incorporated under the laws of Japan, with its registered office at 35-58, Sakashita 3-chome, Itabashi-ku, Tokyo 103-8233, Japan and registered under no. 0114-01-003807 including its Affiliated Undertakings.

Divestment Business: the business or businesses as defined in Section B and in the Schedule which the Notifying Party commits to divest.

Divestment Products: perylene pigment products under the C.I.s P.R.179, P.V.29, P.R.123, P.R.190 and P.R.224 manufactured at the Bushy Park Facility and sold by DIC globally ("**Bushy Park Perylene Products**"); quinacridone pigment products under the C.I.s P.R.122, P.R.202, P.V.19 and P.V.55 manufactured at the Bushy Park Facility and sold by DIC globally ("**Bushy Park Quinacridone Products**").

Divestiture Trustee: one or more natural or legal person(s) who is/are approved by the Commission and appointed by DIC and who has/have received from DIC the exclusive Trustee Mandate to sell the Divestment Business to a Purchaser at no minimum price.

Effective Date: the date of adoption of the Decision.

First Divestiture Period: the period of […] from the Effective Date.

Hold Separate Manager: the person appointed by DIC for the Divestment Business to manage the day-to-day business under the supervision of the Monitoring Trustee.

Inventory: DIC's inventory of Divestment Products and Bushy Park Other Products, raw materials used in the production of the Divestment Products and Bushy Park Other Products, and the Divestment Products and Bushy Park Other Products in production at the time of Closing**.**

Key Personnel: all personnel necessary to maintain the viability and competitiveness of the Divestment Business, as listed in the Schedule, including the Hold Separate Manager.

Monitoring Trustee: one or more natural or legal person(s) who is/are approved by the Commission and appointed by DIC, and who has/have the duty to monitor DIC's compliance with the conditions and obligations attached to the Decision.

Parties: DIC and BCE and their Affiliated Undertakings.

Personnel: all staff currently employed by the Divestment Business, including staff seconded to the Divestment Business.

Purchaser: the entity approved by the Commission as acquirer of the Divestment Business in accordance with the criteria set out in Section D.

Purchaser Criteria: the criteria laid down in paragraph 17 of these Commitments that the Purchaser must fulfil in order to be approved by the Commission.

Schedule: the schedule to these Commitments describing more in detail the Divestment Business.

Sun Chemical: Sun Chemical Group Coöperatief U.A., Leeuwenveldseweg 3-t, 1382 LV Weesp, the Netherlands.

Transitional Agreements: Transitional Services Agreement.

Trustee(s): the Monitoring Trustee and/or the Divestiture Trustee as the case may be.

Trustee Divestiture Period: the period of […] from the end of the First Divestiture Period.

SECTION B THE COMMITMENT TO DIVEST AND THE DIVESTMENT BUSINESS

1.1 Commitment to divest

2. In order to maintain effective competition, DIC commits to divest, or procure the divestiture of the Divestment Business by the end of the Trustee Divestiture Period as a going concern to a purchaser and on terms of sale approved by the Commission in accordance with the procedure described in paragraph 18 of these Commitments. To carry out the divestiture, DIC commits to find a purchaser and to enter into a final binding sale and purchase agreement for the sale of the Divestment Business within the First Divestiture Period. If DIC has not entered into such an agreement at the end of the First Divestiture Period, DIC shall grant the Divestiture Trustee an exclusive mandate to sell the Divestment Business in accordance with the procedure described in paragraph 30 during the Trustee Divestiture Period.

3. The proposed concentration shall not be implemented before DIC or the Divestiture Trustee has entered into a final binding sale and purchase agreement for the sale of the Divestment Business and the Commission has approved the purchaser and the terms of sale in accordance with paragraph 18.

4. DIC shall be deemed to have complied with this commitment if:

   (a) by the end of the Trustee Divestiture Period, DIC or the Divestiture Trustee has entered into a final binding sale and purchase agreement and the Commission approves the proposed purchaser and the terms of sale as being consistent with the Commitments in accordance with the procedure described in paragraph 18; and

   (b) the Closing of the sale of the Divestment Business to the Purchaser takes place within the Closing Period.

5. In order to maintain the structural effect of the Commitments, DIC shall, for a period of ten (10) years after Closing, not acquire, whether directly or indirectly, the possibility of exercising influence (as defined in paragraph 43 of the Remedies Notice, footnote 3) over the whole or part of the Divestment Business, unless, following the submission of a reasoned request from DIC showing good cause and accompanied by a report from the Monitoring Trustee (as provided in paragraph 44 of these Commitments), the Commission finds that the structure of the market has changed to such an extent that the absence of influence over the Divestment Business is no longer necessary to render the Concentration compatible with the internal market.

1.2 Structure and definition of the Divestment Business

6. The Divestment Business consists of DIC's global business for:

(a) the **Divestment Products**, comprising:

(i) Perylene pigment products under the C.I.s P.R.179, P.V.29, P.R.123, P.R.190 and P.R.224 manufactured at the Bushy Park Facility and sold by DIC globally ("**Bushy Park Perylene Products**");

(ii) Quinacridone pigment products under the C.I.s P.R.122, P.R.202, P.V.19 and P.V.55 manufactured at the Bushy Park Facility and sold by DIC globally ("**Bushy Park Quinacridone Products**");

(b) the **Bushy Park Other Products**, comprising:

(i) Isoindoline (C.I. P.Y.139),

(ii) Azo (C.I. P.R.188) and

(iii) Carbon black (C.I. P.Bl.7) pigment products

manufactured at the Bushy Park Facility and sold by DIC globally; and

(c) the **Bushy Park Facility,** where the Divestment Products and the Bushy Park Other Products are manufactured, described in more detail in the Schedule, including, but not necessarily limited to:

(i) all tangible assets owned by DIC and used to manufacture the Divestment Products and the Bushy Park Other Products at the Effective Date (including manufacturing assets, the buildings housing these assets and the related ground leases at the Bushy Park Facility);

(ii) any Inventory;

(iii) all intangible assets (including Exclusively Used Technology, Primarily Used Technology and Licensed Technology as defined in the Schedule, R&D);

(iv) the Quindo**™** and Perrindo**™** brands and any associated trademarks and product names;

(v) at the option of the Purchaser, a transitional, non-exclusive, royalty-free licence for the trademarks SunPlast**™**, SunBrite**™** and Fanchon**™** for a transitional period of up to […] from Closing, extendable for […] periods (i.e., up to a maximum licence duration of […] in total);

(vi) all contracts, leases, commitments and Customer orders of the Divestment Business; all Customer, credit and other records of the Divestment Business;

(vii) all licences, permits and authorisations issued by any governmental organisation for the benefit of the Divestment Business;

(viii) the **Personnel** currently employed at the Bushy Park Facility to the extent engaged in operations relating to the Divestment Products and Bushy Park

Other Products, as well as any sales personnel, product management, and product expert roles, and any other personnel exclusively or predominantly dedicated to the Divestment Business (if any), even if not located at the Bushy Park Facility, subject to employee consent and applicable labour laws and other relevant legislation, who are necessary to ensure the viability and competitiveness of the Divestment Business as described in the Schedule;

(ix) the **Key Personnel** currently employed at the Bushy Park Facility to the extent engaged in operations relating to the Divestment Products and Bushy Park Other Products, subject to employee consent and applicable labour laws and other relevant legislation;

(x) a Transitional Services Agreement ("**TSA**") for a transitional period of up to […] after Closing at […], extendable for […] periods at […], as described in the Schedule.

7. Strict firewall procedures will be adopted so as to ensure that any competitively sensitive information related to, or arising from these Transitional Agreements (for example, product roadmaps) will not be shared with, or passed on to, anyone, outside the DIC business unit providing the relevant services.

8. The legal and functional structure of the Divestment Business as operated to date is described in the Schedule.

SECTION C RELATED COMMITMENTS

1.3 Preservation of viability, marketability and competitiveness

9. From the Effective Date until Closing, DIC shall preserve or procure the preservation of the economic viability, marketability and competitiveness of the Divestment Business, in accordance with good business practice, and shall minimise as far as possible any risk of loss of competitive potential of the Divestment Business. In particular, DIC undertakes:

(a) not to carry out any action that might have a significant adverse impact on the value, management or competitiveness of the Divestment Business (including regarding manufacturing activity, inventory management, and sales volumes and prices) or that might alter the nature and scope of activity, or the industrial or commercial strategy or the investment policy of the Divestment Business;

(b) to make available, or procure to make available, sufficient resources for the development of the Divestment Business, on the basis and continuation of the existing business plans;

(c) to take all reasonable steps, or procure that all reasonable steps are being taken, including appropriate incentive schemes (based on industry practice), to encourage all Key Personnel to remain with the Divestment Business, and not to solicit or

move any Personnel to DIC's remaining business. Where, nevertheless, individual members of the Key Personnel exceptionally leave the Divestment Business, DIC shall provide a reasoned proposal to replace the person or persons concerned to the Commission and the Monitoring Trustee. DIC must be able to demonstrate to the Commission that the replacement is well suited to carry out the functions exercised by those individual members of the Key Personnel. The replacement shall take place under the supervision of the Monitoring Trustee, who shall report to the Commission.

1.4 Hold-separate obligations

10. The Notifying Party commits, from the Effective Date until Closing, to procure that the Divestment Business is kept separate from the business(es) that the Notifying Party will be retaining and, after closing of the notified transaction to keep the Divestment Business Separate from the business that the Notifying Party is retaining and to ensure that unless explicitly permitted under these Commitments: (i) management and staff of the business retained by DIC have no involvement in the Divestment Business; (ii) the Key Personnel and Personnel of the Divestment Business have no involvement in any business retained by DIC and do not report to any individual outside the Divestment Business.

11. Until Closing, DIC shall assist the Monitoring Trustee in ensuring that the Divestment Business is managed as a distinct and saleable entity separate from the business which DIC is retaining. Immediately after the adoption of the Decision, DIC shall appoint a Hold Separate Manager. The Hold Separate Manager, who shall be part of the Key Personnel, shall manage the Divestment Business independently and in the best interest of the business with a view to ensuring its continued economic viability, marketability and competitiveness and its independence from the businesses retained by DIC. The Hold Separate Manager shall closely cooperate with and report to the Monitoring Trustee and, if applicable, the Divestiture Trustee. Any replacement of the Hold Separate Manager shall be subject to the procedure laid down in paragraph 9(c) of these Commitments. The Commission may, after having heard DIC, require DIC to replace the Hold Separate Manager.

1.5 Ring-fencing

12. DIC shall implement, or procure to implement, all necessary measures to ensure that it does not, after the Effective Date, obtain any Confidential Information relating to the Divestment Business and that any such Confidential Information obtained by DIC before the Effective Date will be eliminated and not be used by DIC, unless required for financial reporting purposes until Closing. This includes measures vis-à-vis DIC's representatives on any supervisory or management bodies of the Divestment Business. In particular, the participation of the Divestment Business in any central information technology network shall be severed to the extent possible, without compromising the viability of the Divestment Business. DIC may obtain or keep information relating to the Divestment

Business which is reasonably necessary for the divestiture of the Divestment Business or the disclosure of which to DIC is required by law.

1.6 Non-solicitation clause

13. The Parties undertake, subject to customary limitations, not to solicit, and to procure that Affiliated Undertakings do not solicit, the Key Personnel or Personnel transferred with the Divestment Business for a period of […] after Closing.

1.7 Due diligence

14. In order to enable potential purchasers to carry out a reasonable due diligence of the Divestment Business, DIC shall, subject to customary confidentiality assurances and dependent on the stage of the divestiture process:

(a) provide to potential purchasers sufficient information as regards the Divestment Business; and

(b) provide to potential purchasers after the Effective Date, a version of the Commitments (including the Schedule and its Annexes) without undue delay and no later than at the signing of a Non-Disclosure Agreement by the potential purchaser, or at the opening a data-room, whichever is earlier. Any redaction to the Commitments should be agreed in advance with the Commission and

(c) provide to potential purchasers sufficient information relating to the Personnel and allow them reasonable access to the Personnel.

1.8 Reporting

15. DIC shall submit written reports in English on potential purchasers of the Divestment Business and developments in the negotiations with such potential purchasers to the Commission and the Monitoring Trustee no later than 10 days after the end of every month following the Effective Date (or otherwise at the Commission's request). DIC shall submit a list of all potential purchasers having expressed interest in acquiring the Divestment Business to the Commission at each and every stage of the divestiture process, as well as a copy of all the offers made by potential purchasers within five days of their receipt.

16. DIC shall inform the Commission and the Monitoring Trustee on the preparation of the data room documentation and the due diligence procedure and shall submit a copy of any information memorandum to the Commission and the Monitoring Trustee before sending the memorandum out to potential purchasers.

SECTION D THE PURCHASER

17. In order to be approved by the Commission, the Purchaser must fulfil the following criteria:

(a) The Purchaser shall be independent of and unconnected to DIC and its Affiliated Undertakings (this being assessed having regard to the situation following the divestiture).

(b) The Purchaser shall have the financial resources, proven expertise and incentive to maintain and develop the Divestment Business as a viable and active competitive force in competition with the Parties and other competitors.

(c) The Purchaser shall be an industry participant with experience in the pigment business.

(d) The Purchaser shall have the ability to distribute the Divestment Products and Bushy Park Other Products globally and in the EEA or to have procured such services from a third party.

(e) The acquisition of the Divestment Business by the Purchaser must neither be likely to create, in light of the information available to the Commission, *prima facie* competition concerns nor give rise to a risk that the implementation of the Commitments will be delayed. In particular, the Purchaser must reasonably be expected to obtain all necessary approvals from the relevant regulatory authorities for the acquisition of the Divestment Business.

18. The final binding sale and purchase agreement (as well as ancillary agreements) relating to the divestment of the Divestment Business shall be conditional on the Commission's approval. When DIC has reached an agreement with a purchaser, it shall submit a fully documented and reasoned proposal, including a copy of the final agreement(s), within one week to the Commission and the Monitoring Trustee. DIC must be able to demonstrate to the Commission that the purchaser fulfils the Purchaser Criteria and that the Divestment Business is being sold in a manner consistent with the Commission's Decision and the Commitments. For the approval, the Commission shall verify that the purchaser fulfils the Purchaser Criteria and that the Divestment Business is being sold in a manner consistent with the Commitments including their objective to bring about a lasting structural change in the market. The Commission may approve the sale of the Divestment Business without one or more Assets or parts of the Personnel, or by substituting one or more Assets or parts of the Personnel with one or more different assets or different personnel, if this does not affect the viability and competitiveness of the Divestment Business after the sale, taking account of the proposed purchaser.

SECTION E TRUSTEE

1.9 Appointment procedure

19. DIC shall appoint a Monitoring Trustee to carry out the functions specified in these Commitments for a Monitoring Trustee. DIC commits not to close the Concentration before the appointment of a Monitoring Trustee.

20. If DIC has not entered into a binding sale and purchase agreement regarding the Divestment Business one month before the end of the First Divestiture Period or if the Commission has rejected a purchaser proposed by DIC at that time or thereafter, DIC shall appoint a Divestiture Trustee. The appointment of the Divestiture Trustee shall take effect upon the commencement of the Trustee Divestiture Period.

21. The Trustee shall:

(a) at the time of appointment, be independent of the DIC and its Affiliated Undertakings;

(b) possess the necessary qualifications to carry out its mandate, for example have sufficient relevant experience as an investment banker or consultant or auditor; and

(c) neither have nor become exposed to a Conflict of Interest.

22. The Trustee shall be remunerated by DIC in a way that does not impede the independent and effective fulfilment of its mandate. In particular, where the remuneration package of a Divestiture Trustee includes a success premium linked to the final sale value of the Divestment Business, such success premium may only be earned if the divestiture takes place within the Trustee Divestiture Period.

1.9.1 Proposal by DIC

23. No later than two weeks after the Effective Date, DIC shall submit the name or names of one or more natural or legal persons whom DIC proposes to appoint as the Monitoring Trustee to the Commission for approval. No later than one month before the end of the First Divestiture Period or on request by the Commission, DIC shall submit a list of one or more persons whom DIC proposes to appoint as Divestiture Trustee to the Commission for approval. The proposal shall contain sufficient information for the Commission to verify that the person or persons proposed as Trustee fulfil the requirements set out in paragraph 21 and shall include:

(a) the full terms of the proposed mandate, which shall include all provisions necessary to enable the Trustee to fulfil its duties under these Commitments; and

(b) the outline of a work plan which describes how the Trustee intends to carry out its assigned tasks;

(c) an indication whether the proposed Trustee is to act as both Monitoring Trustee and Divestiture Trustee or whether different trustees are proposed for the two functions.

1.9.2 Approval or rejection by the Commission

24. The Commission shall have the discretion to approve or reject the proposed Trustee(s) and to approve the proposed mandate subject to any modifications it deems necessary for the Trustee to fulfil its obligations. If only one name is approved, DIC shall appoint or cause

to be appointed the person or persons concerned as Trustee, in accordance with the mandate approved by the Commission. If more than one name is approved, DIC shall be free to choose the Trustee to be appointed from among the names approved. The Trustee shall be appointed within one week of the Commission's approval, in accordance with the mandate approved by the Commission.

1.9.3 New proposal by DIC

25. If all the proposed Trustees are rejected, DIC shall submit the names of at least two more natural or legal persons within one week of being informed of the rejection, in accordance with paragraphs 19 and 24 of these Commitments.

1.9.4 Trustee nominated by the Commission

26. If all further proposed Trustees are rejected by the Commission, the Commission shall nominate a Trustee, whom DIC shall appoint, or cause to be appointed, in accordance with a trustee mandate approved by the Commission.

1.10 Functions of the Trustee

27. The Trustee shall assume its specified duties and obligations in order to ensure compliance with the Commitments. The Commission may, on its own initiative or at the request of the Trustee or DIC, give any orders or instructions to the Trustee in order to ensure compliance with the conditions and obligations attached to the Decision.

1.10.1 Duties and obligations of the Monitoring Trustee

28. The Monitoring Trustee shall:

(a) propose in its first report to the Commission a detailed work plan describing how it intends to monitor compliance with the obligations and conditions attached to the Decision.

(b) oversee, in close co-operation with the Hold Separate Manager, the on-going management of the Divestment Business with a view to ensuring its continued economic viability, marketability and competitiveness and monitor compliance by DIC with the conditions and obligations attached to the Decision. To that end the Monitoring Trustee shall:

(i) monitor the preservation of the economic viability, marketability and competitiveness of the Divestment Business, and the keeping separate of the Divestment Business from the business retained by the Parties, in accordance with paragraphs 9-10 of these Commitments.

(ii) supervise the management of the Divestment Business as a distinct and saleable entity, in accordance with paragraph 11 of these Commitments;

(iii) with respect to Confidential Information:

(A) determine all necessary measures to ensure that DIC does not after the Effective Date obtain any Confidential Information relating to the Divestment Business, unless required for financial reporting purposes until Closing,

(B) in particular strive for the severing of the Divestment Business' participation in a central information technology network to the extent possible, without compromising the viability of the Divestment Business,

(C) make sure that any Confidential Information relating to the Divestment Business obtained by DIC before the Effective Date is eliminated and will not be used by DIC, unless required under applicable records retention laws, and

(D) decide whether such information may be disclosed to or kept by DIC as the disclosure is reasonably necessary to allow DIC to carry out the divestiture or as the disclosure is required by law;

(iv) monitor the splitting of assets and the allocation of Personnel between the Divestment Business and DIC or Affiliated Undertakings;

(c) propose to DIC such measures as the Monitoring Trustee considers necessary to ensure DIC's compliance with the conditions and obligations attached to the Decision, in particular the maintenance of the full economic viability, marketability or competitiveness of the Divestment Business, the holding separate of the Divestment Business and the non-disclosure of competitively sensitive information;

(d) review and assess potential purchasers as well as the progress of the divestiture process and verify that, dependent on the stage of the divestiture process:

(i) potential purchasers receive sufficient and correct information relating to the Divestment Business and the Personnel in particular by reviewing, if available, the data room documentation, the information memorandum and the due diligence process, and

(ii) potential purchasers are granted reasonable access to the Personnel;

(e) act as a contact point for any requests by third parties, in particular potential purchasers, in relation to the Commitments;

(f) provide to the Commission, sending DIC a non-confidential copy at the same time, a written report within 15 days after the end of every month that shall cover the operation and management of the Divestment Business as well as the splitting of assets and the allocation of Personnel so that the Commission can assess whether the business is held in a manner consistent with the Commitments and the progress of the divestiture process as well as potential purchasers;

(g) promptly report in writing to the Commission, sending DIC a non-confidential copy at the same time, if it concludes on reasonable grounds that DIC is failing to comply with these Commitments;

(h) within one week after receipt of the documented proposal referred to in paragraph 18 of these Commitments, submit to the Commission, sending DIC a non-confidential copy at the same time, a reasoned opinion as to the suitability and independence of the proposed purchaser and the viability of the Divestment Business after the divestiture and as to whether the Divestment Business is sold in a manner consistent with the conditions and obligations attached to the Decision, in particular, if relevant, whether the divestiture of the Divestment Business without one or more Assets or not all of the Personnel affects the viability of the Divestment Business after the divestiture, taking account of the proposed purchaser;

(i) assume the other functions assigned to the Monitoring Trustee under the conditions and obligations attached to the Decision.

29. If the Monitoring and Divestiture Trustee are not the same legal or natural persons, the Monitoring Trustee and the Divestiture Trustee shall cooperate closely with each other during and for the purpose of the preparation of the Trustee Divestiture Period in order to facilitate each other's tasks.

1.10.2 Duties and obligations of the Divestiture Trustee

30. Within the Trustee Divestiture Period, the Divestiture Trustee shall sell at no minimum price the Divestment Business to a purchaser, provided that the Commission has approved both the purchaser and the final binding sale and purchase agreement (and ancillary agreements) as in line with the Commission's Decision and the Commitments in accordance with paragraphs 17 and 18 of these Commitments. The Divestiture Trustee shall include in the sale and purchase agreement (as well as in any ancillary agreements) such terms and conditions as it considers appropriate for an expedient sale in the Trustee Divestiture Period. In particular, the Divestiture Trustee may include in the sale and purchase agreement such customary representations and warranties and indemnities as are reasonably required to effect the sale. The Divestiture Trustee shall protect the legitimate financial interests of DIC, subject to DIC's unconditional obligation to divest at no minimum price in the Trustee Divestiture Period.

31. In the Trustee Divestiture Period (or otherwise at the Commission's request), the Divestiture Trustee shall provide the Commission with a comprehensive monthly report written in English on the progress of the divestiture process. Such reports shall be submitted within 15 days after the end of every month with a simultaneous copy to the Monitoring Trustee and a non-confidential copy to DIC.

1.11 Duties and obligations of the Parties

32. DIC shall provide and shall cause its advisors to provide the Trustee with all such co-operation, assistance and information as the Trustee may reasonably require to perform its tasks. The Trustee shall have full and complete access to any of DIC's or the Divestment Business' books, records, documents, management or other personnel, facilities, sites and technical information necessary for fulfilling its duties under the Commitments and DIC and the Divestment Business shall provide the Trustee upon request with copies of any document. DIC and the Divestment Business shall make available to the Trustee one or more offices on their premises and shall be available for meetings in order to provide the Trustee with all information necessary for the performance of its tasks.

33. DIC shall provide the Monitoring Trustee with all managerial and administrative support that it may reasonably request on behalf of the management of the Divestment Business. This shall include all administrative support functions relating to the Divestment Business which are currently carried out at headquarters level. DIC shall provide and shall cause its advisors to provide the Monitoring Trustee, on request, with the information submitted to potential purchasers, in particular give the Monitoring Trustee access to the data room documentation and all other information granted to potential purchasers in the due diligence procedure. DIC shall inform the Monitoring Trustee on possible purchasers, submit lists of potential purchasers at each stage of the selection process, including the offers made by potential purchasers at those stages, and keep the Monitoring Trustee informed of all developments in the divestiture process.

34. DIC shall grant or procure Affiliated Undertakings to grant comprehensive powers of attorney, duly executed, to the Divestiture Trustee to effect the sale (including ancillary agreements), the Closing and all actions and declarations which the Divestiture Trustee considers necessary or appropriate to achieve the sale and the Closing, including the appointment of advisors to assist with the sale process. Upon request of the Divestiture Trustee, DIC shall cause the documents required for effecting the sale and the Closing to be duly executed.

35. DIC shall indemnify the Trustee and its employees and agents (each an "**Indemnified Party**") and hold each Indemnified Party harmless against, and hereby agrees that an Indemnified Party shall have no liability to DIC for, any liabilities arising out of the performance of the Trustee's duties under the Commitments, except to the extent that such liabilities result from the wilful default, recklessness, gross negligence or bad faith of the Trustee, its employees, agents or advisors.

36. At the expense of DIC, the Trustee may appoint advisors (in particular for corporate finance or legal advice), subject to DIC's approval (this approval not to be unreasonably withheld or delayed) if the Trustee considers the appointment of such advisors necessary or appropriate for the performance of its duties and obligations under the Mandate, provided

that any fees and other expenses incurred by the Trustee are reasonable. Should DIC refuse to approve the advisors proposed by the Trustee the Commission may approve the appointment of such advisors instead, after having heard DIC. Only the Trustee shall be entitled to issue instructions to the advisors. Paragraph 35 of these Commitments shall apply *mutatis mutandis*. In the Trustee Divestiture Period, the Divestiture Trustee may use advisors who served DIC during the Divestiture Period if the Divestiture Trustee considers this in the best interest of an expedient sale.

37. DIC agrees that the Commission may share Confidential Information proprietary to DIC with the Trustee. The Trustee shall not disclose such information and the principles contained in Article 17 (1) and (2) of the Merger Regulation apply *mutatis mutandis*.

38. DIC agrees that the contact details of the Monitoring Trustee are published on the website of the Commission's Directorate-General for Competition and shall inform interested third parties, in particular any potential purchasers, of the identity and the tasks of the Monitoring Trustee.

39. For a period of […] from the Effective Date the Commission may request all information from DIC that is reasonably necessary to monitor the effective implementation of these Commitments.

1.12 Replacement, discharge and reappointment of the Trustee

40. If the Trustee ceases to perform its functions under the Commitments or for any other good cause, including the exposure of the Trustee to a Conflict of Interest:

(a) the Commission may, after hearing the Trustee and DIC, require DIC to replace the Trustee; or

(b) DIC may, with the prior approval of the Commission, replace the Trustee.

41. If the Trustee is removed according to paragraph 40 of these Commitments, the Trustee may be required to continue in its function until a new Trustee is in place to whom the Trustee has effected a full hand over of all relevant information. The new Trustee shall be appointed in accordance with the procedure referred to in paragraphs 19-26 of these Commitments.

42. Unless removed according to paragraph 40 of these Commitments, the Trustee shall cease to act as Trustee only after the Commission has discharged it from its duties after all the Commitments with which the Trustee has been entrusted have been implemented. However, the Commission may at any time require the reappointment of the Monitoring Trustee if it subsequently appears that the relevant remedies might not have been fully and properly implemented.

SECTION F THE REVIEW CLAUSE

43. The Commission may extend the time periods foreseen in the Commitments in response to a request from DIC or, in appropriate cases, on its own initiative. Where DIC requests an extension of a time period, it shall submit a reasoned request to the Commission no later than one month before the expiry of that period, showing good cause. This request shall be accompanied by a report from the Monitoring Trustee, who shall, at the same time send a non-confidential copy of the report to DIC. Only in exceptional circumstances shall DIC be entitled to request an extension within the last month of any period.

44. The Commission may further, in response to a reasoned request from DIC showing good cause waive, modify or substitute, in exceptional circumstances, one or more of the undertakings in these Commitments. This request shall be accompanied by a report from the Monitoring Trustee, who shall, at the same time send a non-confidential copy of the report to DIC. The request shall not have the effect of suspending the application of the undertaking and, in particular, of suspending the expiry of any time period in which the undertaking has to be complied with.

SECTION G ENTRY INTO FORCE

45. The Commitments shall take effect upon the date of adoption of the Decision.

[…] […]

duly authorised for and on behalf of DIC

SCHEDULE

1. The Divestment Business as operated to date has the following legal and functional structure: the Divestment Business is currently owned and operated by DIC's Affiliated Undertaking Sun Chemical and is not incorporated separately.

2. The Divestment Business, described and specified in more detail in the Schedule of the Commitments, consists of DIC's global business for:

   (a) the **Divestment Products**, comprising:

      (i) Perylene pigment products under the C.I.s P.R.179, P.V.29, P.R.123, P.R.190 and P.R.224 manufactured at the Bushy Park Facility and sold by DIC globally ("**Bushy Park Perylene Products**");

      (ii) Quinacridone pigment products under the C.I.s P.R.122, P.R.202, P.V.19 and P.V.55 manufactured at the Bushy Park Facility and sold by DIC globally ("**Bushy Park Quinacridone Products**");

   (b) the **Bushy Park Other Products**, comprising:

      (i) Isoindoline (C.I. P.Y.139),

      (ii) Azo (C.I. P.R.188) and

      (iii) Carbon black (C.I. P.Bl.7) pigment products

      manufactured at the Bushy Park Facility and sold by DIC globally ("**Bushy Park Other Products**"); and

   (c) the **Bushy Park Facility,** where the Divestment Products and Bushy Park Other Products are manufactured, representing the entirety of DIC's production capacity for the Divestment Products and Bushy Park Other Products, as described in more detail below.

3. The Divestment Business includes:

   (a) the following main **tangible assets**:

      (i) the **Bushy Park Facility**, including, but not limited to:

         (A) all tangible manufacturing assets owned by DIC used to manufacture or contributing to the manufacture of the Divestment Products and the Bushy Park Other Products in the Bushy Park Facility, […];

         (B) the real estate owned by DIC and housing the tangible manufacturing assets used for the manufacturing of the Divestment Products and the Bushy Park Other Products, as well as the related ground leases at the Bushy Park Facility (a map showing the

location of buildings of the Bushy Park Facility to be divested is included in **Annex C1**);

(ii) any **Inventory**;

(iii) the transfer of all **advertising**, **marketing**, **sales**, **publicity** and **presentational materials** designed for and used in connection with the Divestment Products and Bushy Park Other Products, or copies of any such materials designed for and used in connection with the Divestment Products and Bushy Park Other Products for a time period to be agreed by DIC and the Purchaser, subject to reprinting the Purchaser's name, and any copyrights owned by DIC in such materials;

(b) the following main **intangible assets:**

(i) the assignment of all of DIC's **know-how** and intellectual property rights, if any, that is **used** by DIC **exclusively to develop**, **manufacture**, **test**, **market** the Divestment Products and Bushy Park Other Products at the Bushy Park Facility (the "**Exclusively Used Technology**"); for the avoidance of doubt, following the assignment, DIC will be able to use know-how and other intellectual property rights used by BCE in connection with BCE's products;

(ii) if applicable, the assignment of all of DIC's **know-how** and intellectual property rights, if any, that is **used** by DIC **primarily to develop**, **manufacture**, **test**, **market** the Divestment Products and Bushy Park Other Products at the Bushy Park Facility (the "**Primarily Used Technology**"); the purchaser of the Divestment Business shall grant back to DIC an **indefinite, royalty-free, irrevocable, non-exclusive, global licence** to use all **know-how** and other intellectual property rights related to the Primarily Used Technology;

(iii) if applicable, an **indefinite**, **royalty-free**, **irrevocable**, **non-exclusive**, **global licence** under DIC's other intellectual property rights, if any, to use all **know-how** and other intellectual property rights **not exclusively or primarily used** by DIC to **develop**, **manufacture**, **test**, **market** the Divestment Products and Bushy Park Other Products at the Bushy Park Facility, in each case solely for the development, manufacture, testing and marketing of the Divestment Products or Bushy Park Other Products (the "**Licensed Technology**");

(iv) to the extent it concerns **solely or predominantly** the Divestment Products or the Bushy Park Other Products, the Parties shall **transfer** all R&D and pipeline projects (including innovations and development products), and related information existing at the Effective Date to the Purchaser. To the extent they do not concern solely or predominantly the Divestment Products or the Bushy Park Other Products, the Parties will provide a **royalty-free, irrevocable, non-exclusive, global licence** to these **R&**D and pipeline projects;

(v) all historic **production** and **quality control data** gathered by DIC prior to Closing and held by DIC of the Divestment Products and Bushy Park Other Products and historic records on compliance with applicable regulations; provided, however, that any parts of such records that do not relate to the Divestment Products and Bushy Park Other Products may be redacted from the records delivered to the Purchaser;

(vi) the **Quindo™** and **Perrindo™** brand and any associated trademarks and product names;

(vii) at the option of the Purchaser, a transitional, non-exclusive, royalty-free licence for the trademarks **SunPlast™**, **SunBrite™** and **Fanchon™**, in each case solely for the marketing of the Bushy Park Quinacridone Products or Bushy Park Other Products for which they are currently used, for a transitional period up to […] from Closing to allow the Purchaser to re-brand the relevant products to one of its other brands. This […] transitional period can be extended […];

(c) the following **contracts, agreements, commitments** and **understandings**:

(i) where applicable, and to the extent contractually possible, the transfer of any **supply arrangement**, **Customer contracts**, **contract rights**, **commitments**, and **Customer orders** of the Divestment Products and Bushy Park Other Products which contribute to the current operation or are necessary to ensure the viability and competitiveness of the Divestment Business; for contracts that are legally not transferable (if any), DIC will undertake its best efforts to novate written contracts for the supply of the Divestment Products; DIC will take commercially reasonable steps to encourage Customers to move their Divestment Products and Bushy Park Other Products purchasing volumes to the Purchaser;

(ii) where applicable, and to the extent contractually possible, the transfer of any **contracts, agreements commitments and understandings** with the Divestment Business' **suppliers** for the period of time between 2010 and Closing;

(iii) all **prepayments**, **prepaid expenses**, **credits,** etc. relating to 3(c)(i); and

(iv) for the contracts where DIC will be a counterparty, DIC commits to give the option to the Purchaser […];

(d) the following **customer, credit** and **other records**:

(i) the transfer of a **list of all Customers** for the Divestment Products and Bushy Park Other Products, including pending contacts or negotiations with potential new Customers, provided, however, that DIC may continue to use such lists to the extent they relate to its retained businesses (**Annex C6**);

(ii) where applicable, the transfer of any **Customer records** and **transactional data** which contribute to the current operation or are necessary to ensure

the viability and competitiveness of the Divestment Business, provided, however, that DIC may continue to use such records and transactional data to the extent they relate to its retained businesses; and provided further, that any parts of such documentation that do not relate to the Divestment Business may be redacted from the versions delivered to the Purchaser; and provided further, that to the extent that DIC is obliged to retain such documents in support of legal obligations, DIC shall be entitled to do so; and, provided further, that DIC shall not be required to transfer any such customer records and transactional data that do not relate to the Divestment Business; where third-party consent is required for customer documentation to be transferred, DIC undertakes to make all best efforts to obtain such consent;

(iii) a **list of all current suppliers** of raw materials for the production of the Divestment Products and Bushy Park Other Products (listed in **Annex C2**);

(e) the **Personnel** currently employed at the Bushy Park Facility to the extent engaged in operations relating to the Divestment Products and Bushy Park Other Products, as well as any sales personnel, product management, and product expert roles, and any other personnel exclusively or predominantly dedicated to the Divestment Business (if any), even if not located at the Bushy Park Facility, subject to employee consent and applicable labour laws and other relevant legislation, who are necessary to ensure the viability and competitiveness of the Divestment Business (including employees listed in **Annex C3**);

(f) the **Key Personnel** currently employed at the Bushy Park Facility to the extent engaged in operations relating to the Divestment Products and Bushy Park Other Products, subject to employee consent and applicable labour laws and other relevant legislation (including employees listed in **Annex C4**);

(g) to the extent transferable, the transfer of all **licences**, **permits** and **authorisations** specific to the Bushy Park Facility which contribute to the current operation or are necessary to ensure the viability and competitiveness of the Divestment Business (listed in **Annex C7**); and

(h) to facilitate the efficient and smooth transfer of the Divestment Business to the Purchaser a **Transitional Services Agreement**, for a period of up to […] after Closing at […], extendable for […], for the supply of services necessary for the viability and competitiveness of the Divestment Business to the Purchaser. Transitional services include, to the extent technically feasible, IT, purchasing, sales and marketing, technical services (e.g., product experts and product management), supply chain (e.g., warehousing and logistics) and customer service (as further described in **Annex C8**).

4. The Divestment Business shall not include:

(a) any rights to the phthalocyanine pigment products manufactured at assets operated by third parties and sold by DIC globally ("**Bushy Park Phthalocyanine Products**") as defined and further described in **Annex C9**;

(b) any rights to the Ultra Fine Preparation Skid Equipment, Products and Technology as defined and further described in **Annex C9**;

(c) any rights to the Nano-Silver Skid Equipment, Products and Technology as defined and further described in **Annex C9**;

(d) any rights to the non-pigment materials manufactured at the Bushy Park Facility […] as defined and further described in **Annex C9**;

(e) certain personnel currently employed at the Bushy Park Facility listed as excluded personnel in **Annex C10** […] that are not necessary for the viability and competitiveness of the Divestment Business;

(f) any right to DIC's manufacturing or other facilities or equipment not described above and not necessary for the Divestment Business' viability and competitiveness.

5. The Divestment Business shall not include any divestiture of BCE's tangible or intangible assets.

6. If there is any asset or personnel which is not covered by paragraph 2 of this Schedule but which is both used (exclusively or not) in the Divestment Business and is necessary for the continued viability and competitiveness of the Divestment Business, that asset or adequate substitute will be offered to potential purchasers.

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ANNEX C1

Overview of the Bushy Park Facility

[…]

ANNEX C2

List of suppliers of raw materials to the Divestment Business

[…]

ANNEX C3

List of Personnel in the Divestment Business

[…]

ANNEX C4

List of Key Personnel in the Divestment Business

[…]

ANNEX C5

List of brands and trademarks

[…]

ANNEX C6

List of current customers of the Divestment Business

[…]

ANNEX C7

List of key licences, permits and authorisations required for the Divestment Business

[…]

ANNEX C8

List of transitional services under the TSA

[…]

ANNEX C9

Excluded Assets

[…]

ANNEX C10

Excluded Personnel

[…]