NON-CONFIDENTIAL VERSION

**COMPETITION TRIBUNAL OF SOUTH AFRICA**

**Case No: 14/LM/Feb2**
**(014001)**

In the matter between:

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| **Senmin International (Pty) Ltd**<br>**Cellulose Derivatives (Pty) Ltd** | **Applicants** |
| and | |
| **The Competition Commission** | **Respondent** |

In consideration of the intermediate merger between:

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| **Senmin International (Pty) Ltd** | **Primary Acquiring Firm** |
| and | |
| **Cellulose Derivatives (Pty) Ltd** | **Primary Target Firm** |

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| Panel | : | Takalani Madima (Presiding Member)<br>Andreas Wessels (Tribunal Member)<br>Merle Holden (Tribunal Member) |
| Heard on | : | 02 - 06, 09, 12 and 13 July 2012; and 11, 12 and 27 September 2012, with last submission received on 31 October 2012 |
| Order issued on | : | 08 November 2012 |
| Reasons issued on | : | 07 February 2013 |

## Reasons for Decision

### Conditional approval

1. On 08 November 2012 the Competition Tribunal ("Tribunal") conditionally approved the intermediate merger involving Senmin International (Pty) Ltd ("Senmin"), the

primary acquiring firm, and Cellulose Derivatives (Pty) Ltd ("CD"), the primary target firm (these parties are collectively referred to hereinafter as "the merging parties").

2. The reasons for conditionally approving the proposed transaction follow below.

**Parties to proposed transaction and their activities**

*Acquiring firm*

3. The acquiring firm is Senmin. Senmin is a wholly-owned subsidiary of Chemical Services Limited, which in turn is controlled by AECI Limited ("AECI"). AECI is a public company listed on the Johannesburg Stock Exchange (JSE).

4. Senmin *inter alia* distributes a range of (specialised performance) chemicals and supplies related services to the mining industry. These chemicals include so-called "reagent" chemicals that are used in flotation in platinum mines and include amongst them depressants, collectors and frothers.

5. Of particular relevance to the competition assessment of this transaction are Senmin's activities as a distributor of technical grade carboxymthylcellulose ("CMC") to platinum mining customers in South Africa. CMC acts as a depressant in the mining froth flotation process (see further description of CMC below). Senmin, more specifically, markets three technical grade CMC products to the mining industry, namely Sendep 30D, Sendep 30E and Sendep 30F. These products are manufactured exclusively for Senmin by CD (the target firm), using Senmin's proprietary knowhow.

6. Senmin furthermore is the only local producer of xanthate, a collector[1] in the mining flotation process.[2]

7. Senmin further offers so-called *Vendor Management Services* ("VMS") to its mining customers. For this purpose Senmin has employed a large number of metallurgists, technicians and process operators. According to Senmin its VMS contracts with its mining customers contain a "target" for the percentage of chemicals that customers

[1] The process of creating a mineral rich froth is achieved by adding a surfactant or "collector" chemical in order to render the surface of the minerals hydrophobic.
[2] Although Senmin currently mostly sells xanthate in liquid form, it recently also invested in a solids (i.e. pelletised) xanthate plant.

should source from Senmin in order for its service to be effective.[3] Mr. Botha, Senmin's factual witness (see paragraph 11.3 below), however contended that this contracted target is not enforced in practice.[4] We however note that non-VMS CMC sales comprise a relatively small proportion of Senmin's overall CMC sales, with the majority of Senmin's CMC being sold via VMS.[5]

*Target firm*

8. The primary target firm is CD. CD is controlled by the Shannon Trust.[6] CD does not directly or indirectly control any other firm.

9. CD is the only producer in South Africa of technical grade CMC. It produces five grades of technical grade CMC and is the proprietor of the "Norilose" CMC brand. These CMC products have varying properties, but are predominantly used in mining applications and in the production of detergents. It is the mining applications that are relevant to the competition assessment of this transaction.

10. CD's CMC production process is referred to as a "dry" process.[7] It currently has two operating lines: one production line supplies technical grade CMC to Senmin (the acquiring firm) and the other production line supplies technical grade CMC to G.M. Associates CC ("GMA"). Besides Senmin, GMA is the only other significant distributor of technical grade CMC products to the mining industry in South Africa (see paragraphs 75 to 79 below).

**Witnesses**

11. The following witnesses gave evidence at the Tribunal hearing:

[3] See transcript pages 809 to 811 for Mr. Botha's (see paragraph 11.3 below) testimony on Senmin's VMS requirements regarding mining customers' minimum product purchases.
[4] See slide 10 of Exhibit 17, which shows the depressants and xanthates as a percentage of Senmin's VMS sales per customer.
[5] See RBB Report, paragraph 170.
[6] The beneficiaries of the Shannon Trust are members of the Shannon family.
[7] Certain other (international) CMC producers, such as Lamberti (see paragraph 11.4 below), uses a solvent media process to produce CMC. See Mr. Ferrari's testimony at transcript pages 417 and 418.

*Economic experts*

11.1. Mr. Richard Murgatroyd ("Murgatroyd") from RBB Economics testified as an economics expert for the merging parties.

11.2. Ms. Sarah Truen ("Truen") from DNA Economics testified as an economics expert for the Competition Commission ("Commission").

*Factual witnesses*

11.3. The merging parties called the following factual witnesses:

- Mr. Cecil Shannon ("Shannon"), a Director of CD; and
- Mr. Theunis Botha ("Botha"), the Managing Director of Senmin.

11.4. The following factual witnesses gave testimony on behalf of the Commission:

- Mr. Selwyn Edward Green ("Green"), the Senior Manager Technical, Concentrators at Lonmin Platinum Mining ("Lonmin").

  Lonmin is a primary producer of Platinum Group Metals and a customer of a suite of reagent chemicals used in flotation, including CMC products. It currently purchases technical grade CMC both from Senmin and GMA.

- Mr. Chris Pretorius ("Pretorius"), the Managing Director of ChemQuest Africa (Pty) Ltd ("ChemQuest").

  ChemQuest is active in the trading of chemicals to the mining industry, including the supply of carbon, cyanide and flocculants. It also supplies flotation chemicals like depressants, xanthates, frothers, collectors and copper sulphate. It buys CMC products from GMA.

- Dr. Mario Ferrari ("Ferrari"), the Director for the CMC Technology Platform at Lamberti S.p.A ("Lamberti").

  Lamberti, headquartered in Italy, is a global manufacturer of speciality chemicals, including all grades of CMC. Its main manufacturing presence is in China, the USA, Brazil and India, although only its

Italian plant produces CMC.[8] Lamberti supplies CMC to GMA, but it neither directly supplies CMC to any mining customer in South Africa nor does blending of CMC in South Africa (also see paragraph 114 below).

- Mr. Greg Nielson ("Nielson"), the owner and manager of GMA.
  GMA is active in *inter alia* the production and distribution of chemicals for the metallurgical industry, including flotation and gangue depressants. This includes the supply of technical grade CMC to the platinum minerals mining industry. A portion of the CMC acquired by GMA is on-sold whilst the rest is processed to produce cellulose based gangue depressants which are sold under GMA brand names. GMA currently sells approximately 18 different CMC products.

12. We note that Green from Lonmin, a Commission witness, was the only mining customer to testify at the hearing and that the merging parties did not call any mining customer as a witness. This is relevant since one of the major issues in dispute between the merging parties and the Commission was the substitutability by mining customers between different CMC products, specifically those of Senmin and GMA.

**Proposed transaction and rationale**

13. In terms of the *Sale of Business Agreement*, Senmin will acquire the technical grade CMC manufacturing business of CD as a going concern giving Senmin sole control of CD on completion of the proposed transaction.

14. As rationale for the proposed transaction Botha stated that Senmin wishes to secure its current and future supply of CMC without the risk of disclosing its know-how to an actual or potential competitor. We further note that Senmin's strategic documents identify the risks of a CMC "*loss of supply*" or an "*alternative buyer*" of CD.[9] Senmin further stated that it wishes to further develop the technology in its CMC products and thus enhance its value proposition to local platinum producers,

[8] See transcript page 367.
[9] Transcript page 991 in particular, as well as pages 990 to 995. Also see record page 2130.

which it is best able to do by operating its own CMC plant. Senmin furthermore believes that there is an opportunity for it to expand CD's production capacity after the proposed merger.[10]

15. From the sellers' perspective, the current CD shareholders wish to realise the value of the CD business.

**Background to competition assessment**

16. This intermediate merger was notified to the Commission in October 2011 and the Commission prohibited the proposed transaction in January 2012. We note that the Commission had also previously, i.e. in 2009, prohibited this merger. In the latter case the merging parties sought no consideration of the matter by the Tribunal.

17. On 07 February 2012 the merging parties, in terms of section 16(1)(a) of the Competition Act of 1998,[11] filed a request with the Tribunal to consider the proposed merger, setting out the grounds upon which they submitted the Tribunal should approve the proposed merger, with or without conditions.

18. As is evident from the above description of the merging parties' activities, there is a vertical relationship between them since CD manufactures and supplies technical grade CMC to Senmin which Senmin distributes to its platinum mining customers.

19. We note that the proposed merger raises no public interest concerns. The merging parties confirmed that there will be no negative effect on employment in South Africa as a result of the proposed transaction and that no retrenchments are envisaged.[12] The proposed transaction further raises no other public interest concerns. We therefore only deal with the competition aspects in these reasons.

20. In these reasons we shall focus on the main competition issue in dispute between the merging parties and the Commission, namely the prospects for the proposed merger to result in anti-competitive effects in the downstream CMC distribution market as a result of the (input) foreclosure by the merged entity of other CMC distributors, specifically of GMA. GMA, as a current CMC customer of CD and a

[10] Botha's witness statement paragraphs 5.1 to 5.3.
[11] Act No. 89 of 1998, as amended.
[12] See *inter alia* page 13 of the Commission's merger record.

(potential) rival to Senmin in the distribution of CMC, raised the concern that the vertical integration caused by the merger would cause GMA to be refused local CMC supplies at competitive prices which would increase its costs.

21. The Commission concluded that the merger is likely to result in two forms of foreclosure of the merged entity's downstream rival(s) in CMC distribution, in particular GMA, namely (i) a complete or partial refusal to supply; and/or (ii) a raising of rivals' costs.

22. We note that we shall not in these reasons deal with the Commission's "leveraging" theory as advanced by Truen. The Commission namely contended that the proposed merger will give the merged entity the ability to leverage its market power in certain markets into adjacent markets where it does not have market power to achieve anti-competitive outcomes. More specifically, the Commission posited that, if Senmin achieved market power in relation to the distribution of CMC as a result of the proposed merger, it would be able, through the use of certain "*minimum purchase requirement*" provisions in Senmin's VMS agreements with mining customers (see paragraph 7 above), to leverage that market power into the markets for other flocculent chemicals (thus foreclosing competitors in those markets through bundling). We have however imposed behavioural conditions on the merged entity that address the merger-specific concern of post-merger input foreclosure in relation to CMC. We further note that Senmin provided its VMS services prior to the proposed merger. Given this fact and the supply conditions that we have imposed on the merged entity in relation to CMC, we found that the "leveraging" form of competitive harm was unlikely to be of concern. We therefore do not deal with this aspect in any further detail in these reasons.

23. We further note that we shall also not in these reasons deal with the Commission's additional theory of harm relating to a self-standing concern of input foreclosure in the (adjacent[13]) frothers market(s) since this theory was not adequately substantiated by evidence of likely harm.

[13] I.e. adjacent to the CMC market(s).

24. The Commission contended that the proposed merger should be prohibited. The merging parties however tendered a set of behavioural conditions which in their view addressed the Commission's concerns with regards to any potential post-merger input foreclosure of (other) CMC distributors in South Africa. The Commission, however, was of the view that these supply conditions were inadequate to address the competition concerns. It furthermore during closing argument contended that if the tendered conditions were to be imposed by the Tribunal, then it had to be strengthened in certain respects.

25. The Tribunal therefore requested the Commission to provide written comments on the merging parties' tendered set of conditions. The Commission submitted these comments to the Tribunal on 12 October 2012, to which the merging parties responded on 19 October 2012. After further correspondence between the Tribunal and the merging parties they accepted a number of the Commission's proposed enhancements of their tendered conditions. The Tribunal received the merging parties' amended and final set of tendered conditions on 31 October 2012. We have imposed these behavioural conditions on the merged entity, together with an additional condition that relates to the monitoring of the pricing provisions of the conditions (see paragraphs 120 to 122 below).

***CMC and its uses***

26. As background to the market delineation and further competition analysis that follow, we provide the following background to the characteristics of CMC, the various types of CMC manufactured and supplied and their downstream uses in other production processes.

27. CMC is a sodium salt of a carboxymethyl cellulose derivative derived from wood pulp or cotton linters. The production of CMC is achieved by the reaction of cellulose with monochloroacetic acid in the presence of sodium hydroxide. It forms an odourless white semi-synthetic polymer powder, with salts such as sodium chloride and sodium glycolate as in situ by-products. Depending on the degree of derivatisation and molecular size, the CMC powder gradually dissolves in water at low concentrations to form a clear or opaque viscous solution. CMC is mainly used

to control the viscosity and rheology of fluids as a thickener, stabiliser or suspending agent.

28. Different CMC grades are manufactured which are classified according to the purity of the CMC in the product (i.e. the extent of removal or lessening of salts in its production process); its degree of derivatisation (DS); and its polymer chain length (i.e. the number of linked polymer glucose units).

29. The industry in general refers to two main types of CMC, namely (i) pure grade CMC; and (ii) technical grade CMC. The basic difference between pure and technical grade CMC is that the sodium chloride (see paragraph 27 above) is washed out using large amounts of solvents from the technical grade CMC which gives the purified grade CMC. We discuss these two CMC grades in more detail below.

*Pure grade CMC*

30. Pure grade CMC, mainly used in the production of food products, pharmaceuticals and cosmetics, is not produced in South Africa and therefore all pure grade CMC is imported into South Africa.[14] Ferrari testified that pure grade CMC is more than 95% pure and that so-called "food" grade CMC is more than 99% pure.

31. Pure grade CMC is however also used in the platinum mining industry in Zimbabwe where the specific Zimbabwean mines have equipment designed for the use with pure grade CMC. Botha indicated that although pure grade CMC can be used in mining, it is costly to extract salts in the CMC purification process. As a result, it is generally only economically viable to use pure grade CMC in mining if a very considerable amount of CMC is required as a depressant and/or special polymer characteristics are required for the use in respect of the ore in question.[15]

[14] See *inter alia* Shannon's witness statement at paragraph 4.11.
[15] Botha's witness statement, paragraph 3.6.

*Technical grade CMC*

32. Technical grade CMC[16] is used in the South African mining industry in froth flotation processes, in the detergents industry and in the manufacturing of binders, adhesives and soaps. "Detergent" grade CMC is normally supplied to detergent powder manufacturers such as Unilever and Procter & Gamble. We note that for the detergent industry the use of CMC is not so specific and therefore not as critical as per the mining flotation application.[17]

33. CD manufactures only technical grade CMC. Our competition analysis focuses on the use of technical grade CMC in mining for flotation.

34. The South African platinum mines require not only depressants, but a suite of reagent chemicals used in flotation, including depressants, collectors (i.e. xanthate[18]), frothers and copper sulphate[19]. This flotation process occurs when ore is finely milled and then undergoes several treatments with various types of chemicals, which are designed to remove impurities in the ore and concentrate the mineral being extracted. The suite of chemicals varies depending on the characteristics of the ore, the relative costs of the various chemicals and the desired outcome.

35. Froth flotation, more specifically, proceeds from crushing and grinding ore in order to decrease the particle size and liberate valuable minerals. It is a process for selectively separating minerals from gangue by collecting the minerals reporting in the froth phase, while at the same time retaining the gangue in the slurry phase. A combination of a number of chemicals is used to extract the valuable minerals from the ore using the natural floatability of gangue and the tendency for heavy mineral to sink to achieve selective separation of a mineral-rich ore. Polysaccharides (carbohydrate polymers of repeating monosaccharide units) such as starch, CMC or

[16] Ferrari indicated that the purity level of technical grade CMC would normally be up to 75% (see transcript page 378).
[17] See *inter alia* Ferrari's witness statement, paragraph 25.
[18] Xanthate is the primary collector in use in the mining industry.
[19] This is used as a froth modifier.

natural gums (such as guar) are added as depressants for gangue to the flotation process.[20]

**Vertical relationship and relevant markets**

36. As noted in paragraph 18 above, the proposed merger is best characterised as vertical in nature. The structure of the supply chain of technical grade CMC can essentially be broken down into two levels, namely (i) CMC manufacture and supply, the upstream market; and (ii) CMC distribution to mining customers, the downstream market. CD is active at the manufacturing level and Senmin (and GMA) are active at the distribution level.

*CMC vs. guar*

37. The two main depressants required by the South African platinum mines are CMC and guar. It was however largely common cause that for most mining customers guar is not a real substitute to CMC.[21] This was clear from the testimony of the factual witnesses.

38. The evidence was that a mine's choice of depressant is determined primarily by the characteristics of the ore body in question. Pretorius indicated that there are rare instances where mines can use both guar and CMC and that the decision whether to use guar or CMC or both depends on the type of ore body in that particular location.[22] Botha indicated that guar is different to CMC with respect to viscosity, ionic charge and structure. He stated that the differences in these factors in most instances make the one product substantially more appropriate to the needs of a particular mining customer than the other. A mining customer would typically only consider switching between CMC and guar if there was a change in the mining process or the ore body.[23] Green confirmed that Lonmin switched from using guar to using CMC since "*CMC was a better depressant and could be used on both*

[20] See Botha's witness statement, paragraphs 3.5 to 3.11.
[21] See RBB Report, paragraphs 40 and 41.
[22] Pretorius's witness statement, paragraphs 23 and 24.
[23] Botha's witness statement, paragraph 3.18.

*Merensky and UG2 type ores. Thus Lonmin only uses CMC on all of its concentrator plants.*"[24]

39. Furthermore, with regards to price, Green stated that at times CMC has been cheaper than guar[25] and Botha indicated that guar is subject to very significant fluctuations in price. Botha also stated that while reasonable variations in price would not impact upon a mine's choice of depressant, the variations in guar cost are sufficiently significant that they can affect the overall profitability of the mine. He said that, for example, the price of guar recently moved from $1 000/ton to $20 000/ton.[26]

40. We conclude that technical grade CMC and guar constitute separate relevant product markets from a mining customer perspective.

*Pure grade CMC*

41. We have found no credible evidence that pure grade CMC - from a general South African based mining customer perspective - is a real substitute for technical grade CMC. In general terms pure grade CMC is too expensive for use in local mining, despite the fact that less product is required for the same level of efficacy. No mining customer indicated the contrary. However, as noted above, pure grade CMC (imported from China as far as we know) is used in certain Zimbabwean mines (see paragraph 31 above).

*Technical grade CMC for use in detergents*

42. The merging parties contended that technical grade CMC for use in detergents constitutes a technically and economically feasible alternative to the CMC that GMA currently sources from CD. We however found no cogent evidence in support of this claim for the general South African mining customer.

[24] Green's witness statement, paragraph 12.
[25] Green's witness statement, paragraph 12.
[26] Botha's witness statement, paragraph 3.18.

*Conclusion: relevant markets*

*Upstream market*

43. We conclude that the relevant upstream market is the market for the manufacture and supply of technical grade CMC for use in mining.

44. With regards to the geographic scope of this market, Truen argued that the market is regional (including South Africa and its neighbouring countries) while Murgatroyd argued that the market should include both domestically-produced CMC and imports. We discuss CMC imports below and conclude that, on balance, there is no reason to believe that (actual and potential) CMC imports would be a significant post-merger constraint on the merged entity (see paragraphs 50 to 74).

*Downstream market*

45. With regards to the downstream market, the evidence was that the supply of CMC to South African mining customers is intermediated by distributors, i.e. there is no direct supply by CMC manufacturers to mining customers. We define the relevant downstream market as the market for the distribution of CMC for use in flotation in mining. We note that the primary dispute between the merging parties and the Commission centred on the extent to which products within the distribution market were differentiated from each other, rather than on the exact boundaries of the relevant product market. We deal with the merging parties' claims regarding differentiation below.

46. The economic experts of the merging parties and the Commission were in agreement that this market is national in its geographic scope.

**Market concentration**

***Upstream production and supply of technical grade CMC***

47. As stated in paragraph 9 above, CD is the only manufacturer in South Africa of technical grade CMC.[27]

48. The evidence has further shown new entry into CMC production in South Africa to be highly unlikely. We note that the proposed merger results in the removal of any threat of potential entry by Senmin at the CMC production level. We further note that Shannon indicated that CD currently produces well below capacity.[28] Ferrari was of the view that *"[i]t will not add value to the South African market to introduce another manufacturer because the estimated growth in the mining industry, as well as in other applications, does not justify the investment. Also, the current and potential market for CMC in South Africa does not justify the investment of a new CMC plant in the country."*[29] Nielson held a similar view and stated that, given the size of the South African market and the existing capacity of CD, it would be difficult to justify an investment in a plant sufficiently large to realize economies of scale in order to service the domestic demand for CMC.[30]

49. Thus, ignoring (potential) imports (discussed below) for the time being, the upstream CMC production market is extremely concentrated with CD as the only local manufacturer and supplier of technical grade CMC. As further noted, future new entry at the production level is highly unlikely.

*CMC imports*

50. At the core of the debate between the merging parties and the Commission was the question whether a local CMC distributor is able to import CMC of a sufficient quality into South Africa at a competitive price compared to the local price of CD. The merging parties contended that imports exert a competitive constraint on CD and should therefore be included in the delineation of the upstream geographic market. This contention thus is also highly relevant to the issue of the merged

[27] Shannon noted that a company named Somchem also manufactured technical grade CMC in South Africa for mining but that it ceased production in 1998.
[28] Shannon's witness statement, paragraph 4.4.
[29] Ferrari's witness statement, paragraph 40.
[30] Nielson's witness statement, paragraph 25.

entity's ability to post-merger foreclose other local CMC distributors. The Commission, on the other hand, held that technical grade CMC imports were not a post-merger constraint on the merged entity.

51. We have considered the available evidence with regards to historical imports of technical grade CMC into South Africa, as well as failed attempts to import. We have also considered the claimed, but untested, potential of such imports (as advanced by the merging parties), as discussed below.

52. Although the Commission's market investigation confirmed that significant amounts of CMC is currently supplied into South Africa, it found that it is not possible from the available import statistics to differentiate between pure and technical grade CMC. This was confirmed by Shannon.[31] It is therefore not currently possible to quantify, apart from the GMA CMC import data, the levels of imports of CMC for use in mining applications.

53. The evidence further was that the local food industry imports high quality CMC. As noted above, pure grade CMC by definition is imported into South Africa because there is no domestic production of pure grade CMC. As also noted, there is no evidence that mining customers in South Africa can use pure grade CMC in their flotation processes as a real substitute to mining grade CMC. As also noted above, pure grade CMC is however used in Zimbabwe since it is suitable to the particular ore bodies and equipment used.

54. The evidence further was that the detergent industry imports low quality technical grade CMC. Shannon confirmed that a significant proportion of the imports of technical grade CMC is currently used in the manufacturing of detergents.[32]

55. The Commission therefore concluded that there are imports of pure grade CMC used in the food industry and of lower grade CMC used in the detergent industry, but that such imports would not pose any competitive constraint on the merged entity. Based on the available evidence on balance we concur with this finding.

[31] Shannon's witness statement, paragraph 4.2.
[32] Shannon's witness statement, paragraph 4.3.

56. Given the highly concentrated nature of both the upstream CMC production and the downstream CMC distribution markets, as well as the limited number of mining customers in South Africa that use technical grade CMC, market participants in general would be aware of which distributors are supplying which mining customers and if any mining customer is directly sourcing its CMC requirements from overseas. Despite Shannon's allegations that several local distributors import technical grade CMC to supply to the mining industry[33] we found no reliable evidence indicating that any local CMC distributor, apart from GMA (see paragraph 57 below), is currently supplying imported technical grade CMC to platinum mining customers in South Africa. Furthermore, both ChemQuest and Protea Mining ("Protea") source their CMC requirements from GMA. Neither have we found any evidence of platinum mining customers directly importing CMC.

57. With regards to GMA, it currently imports CMC from Lamberti and uses this for further processing and blending of technical grade CMC used in mining flotation. Although Ferrari indicated that Lamberti used to (through a local distributor) supply technical grade CMC to a platinum mining customer in South Africa (but stopped this supply more than 15 years ago because it was not economically viable),[34] Lamberti currently supplies CMC to GMA.[35] Nielson's evidence however was that all imported CMC of GMA is used in blends and cannot replace the CMC supplied to it by CD as a base in the blending or reacting process to produce the range of CMC products that GMA currently supplies to its mining customers.[36]

58. Neilson further testified in chief on GMA's attempts to import technical grade CMC into South Africa, the costs of such imports and certain problems relating to the quality and performance of certain international CMC sources of supply. He stated that GMA in order to reduce its dependence on its primary supplier, CD, has investigated the potential for importing technical grade CMC to use in the mining industry.

[33] Shannon's witness statement, paragraph 4.8.
[34] Ferrari's witness statement, paragraph 20. Also see transcript page 394.
[35] Ferrari's witness statement, paragraph 32.
[36] See transcript, *inter alia*, pages 534 to 536, 547 and 548.

59. Nielson further testified that GMA over the last few years investigated sourcing imports from China, India and Europe, specifically from Lamberti.[37] According to Neilson, GMA has been unable to find a source of supply which is both of suitable quality and competitive on a cost basis with the domestically produced CMC.[38] He also testified that where he could find equivalent CMC products to that sourced locally from CD, there were problems with the cost of importing such products and where the cost was reasonable, the products did not pass tests on quality and performance. In Nielson's words: "*[n]ormally when the spec is correct the cost is too much, when the cost is correct the spec is not correct. Often you get products that are supposedly equivalent specs that you find they are not at all especially coming from China you find that a lot of the products are not exactly or not anywhere near the spec they supposedly report it to be.*"[39]

60. Neilson further referred to extensive email correspondence between GMA and international CMC manufacturers in which requests for products were made – i.e. CMC products with equivalent specifications to that currently supplied to GMA by CD. He referred to GMA's comments on the quotations supplied, which included that: the products did not work;[40] the prices quoted, together with applicable duties, were unworkable;[41] the products failed laboratory tests when compared to the currently used material;[42] the DS was too low and therefore the sample failed;[43] and in the case of high purity products it performed satisfactorily but was too expensive.[44]

61. We note that Nielson acknowledged that the difficulty with CMC imports is not *per se* a quality issue, i.e. it is technically possible for an imported product to replicate that produced and supplied to GMA by CD. Although he stated that "*it is technically possible to source imported CMC of sufficient quantity and quality for the mining*

[37] Transcript page 541.
[38] Nielson's witness statement, paragraph 22.
[39] Transcript page 542.
[40] Transcript pages 550 and 551.
[41] Transcript page 551.
[42] Transcript page 554.
[43] Transcript page 555.
[44] Transcript pages 555 and 556.

*flotation process*", he maintained that it is not possible to source imported CMC of an acceptable quality "*at a competitive price*".[45]

62. With regards to price, Nielson noted that imported CMC from certain countries is subject to an import duty while those from the EU can enter duty free;[46] that by importing CMC raises the costs of local transportation from the port of Durban; and that CMC imports require the keeping of higher local stock levels to offset the risk of disruptions of the flotation process at mines.[47] This increases a local distributor's storage costs.[48]

63. We note that the economic experts of the merging parties and Commission agreed that customs duties and transport costs would have to be added to the price of imported CMC to arrive at the landed costs of CMC, but disagreed on the exact calculation of such costs and its ultimate impact on a comparison between the landed cost of an imported CMC product and the delivered price of CD's product.

64. With regards to the requirement of increased local CMC stock levels Nielson explained that "*[m]ines are extremely sensitive to any disruption of the flotation process, and thus in order to offset the risks of a disruption in international supply chains, the importer must hold much larger stocks of inventory than is needed when domestic CMC can be purchased.*"[49] We have accepted Nielson's argument since it is entirely consistent with Green's evidence. Green, from a mining customer perspective, underscored the importance of security of CMC supply to a mine. He stated that "*Lonmin needs a steady supply of reagents to make sure that its concentrator plants are kept in operation.*"[50] Green further testified that Lonmin cannot accept any interruption in CMC supply. He stated that "*I think if you worked on a production plant of most types, specifically in precious metals any disruption in your operation costs money, not only the metal that you lose but to start up an operation again costs tremendous amount of money, getting the process stabilised*

[45] Nielson's witness statement, paragraph 24.
[46] Shannon indicated that there are no import tariffs payable in relation to CMC imported from Europe and that imports from India, China and Turkey are subject to an import tariff of 10% (see Shannon's witness statement, paragraph 4.6).
[47] Nielson's witness statement, paragraph 23.
[48] Transcript pages 565 and 566.
[49] Nielson's witness statement, paragraph 23.
[50] Green's witness statement, paragraph 18.

*and getting back to use it in normal terms, getting back to recovery level costs money and loss in production. So no loss in production is acceptable.*"[51]

65. On Truen's version, the lost "opportunity costs" due to the higher CMC stock level requirement would add an additional 2% to the landed cost of the CMC. Murgatroyd did not dispute that these higher costs exist, but argued that Truen's figure was exaggerated. We can however accept that higher local stock levels are required when importing CMC and that this would increase a local distributor's, such as GMA's, costs compared to a situation where a local source of CMC supply is available (as would be available to Senmin post-merger).

66. Furthermore, Ferrari's testimony regarding the price of its CMC exports to South Africa (through its commercial arrangement with GMA) corroborated Nielson's testimony. When challenged under cross-examination Ferrari explained that the reason for Lamberti not being competitive in South Africa is that a local manufacturer, CD, supplies GMA. He stated that "*[i]t makes no point to try and try and try again with a customer [GMA] that is saying more than one time that we [Lamberti] are not competitive.*"[52]

67. We note that we have found the price-related evidence of Pretorius in relation to CMC imports to be of little probative value since it related to a specific historic period, i.e. 2009.

68. Under cross-examination it was suggested to Nielson that GMA's past investigations of CMC imports were related only to sourcing products that were cheaper than the base product supplied by CD and that this was the basis of his comparison.[53] In other words, it was suggested that Nielson's past investigations of CMC imports (allegedly aimed only at finding lower CMC prices) are irrelevant to the likely competition effects inquiry in a post-merger world.

69. Whilst we accept that the question raised in the context of this merger assessment is whether there would be feasible alternatives available to GMA post-merger in the event that Senmin refused to supply GMA with the relevant CMC base product or

[51] Transcript page 77.
[52] Transcript page 432.
[53] Transcript page 743.

otherwise raised the price thereof to GMA (as part of a strategy to raise GMA's costs and force GMA out of the market), we do not regard Nielson's evidence as irrelevant to the merger assessment given the particular circumstances of this case, as explained below.

70. Nielson's evidence was clear that GMA investigated the possibility of imports "*over the last few years when we have had this merger application going through but before that as well ....*"[54] In paragraph 16 above we noted that this merger was first notified to and prohibited by the Commission in 2009.

71. Furthermore, not only did Neilson in re-examination confirm that he was looking for CMC products that had equivalent performance to the product sourced from CD and were economically competitive[55], but also gave uncontested evidence of threats made by CD, on two separate occasions, i.e. both in 2010 and 2011, to cut the CMC supply to GMA. Nielson stated that "*[i]n 2010 we were threatened with foreclosure if we didn't lift the prohibition of (sic) [objection to] the merger and were told that the supply would be stopped to us that there was only 8 tons of product left for us while supply would be continued to Senmin ...*";[56] and *"[t]he second incident was in December 2011 when the Competition Commission was again considering the merger we were told ... line [supplying CMC to GMA] closed and will not reopen in 2012 ....* "[57]

72. Given that the supply of CMC by CD to GMA was under real threat for a considerable period of time, GMA had a genuine commercial incentive to find an alternative CMC source of supply even if at the same price than the (then prevailing) CD price. Given these circumstances we do not accept the merging parties' argument that GMA in the past would only have sought a cheaper overseas CMC supplier than CD and not one with a similar price to CD.

73. The merging parties' further counter to Neilson's evidence was to produce quotations from three potential CMC suppliers (one Turkish and two Chinese firms) that they contended were equivalents of that supplied by CD to GMA, and that the

[54] Transcript page 541.
[55] Transcript page 771.
[56] Transcript page 592.
[57] Transcript pages 592 and 593.

prices quoted were competitive. This evidence was however unhelpful and indeed meaningless from a substitution perspective since none of these products were tested for quality and performance, which testing the factual witness considered a prerequisite of any CMC supply to mining customers (see paragraphs 102 and 103 below). Botha conceded that no testing whatsoever was done on these products to date[58]. One therefore cannot assume that these CMC products would be of an acceptable quality to local mining customers. Below we shall discuss the elements that mining customers consider in their CMC procurement decisions and note that this evidence unequivocally was that quality considerations are the single most important factor in the choice by a mining customer of a CMC supplier (see paragraphs 80 to 82 below).

*Conclusion*

74. We conclude that there is no credible evidence - from both a quality and price perspective - of potential supplies of imported CMC for use in mining as a real alternative to the local supply (by CD) of CMC and thus as a potential constraint on the merged entity after this merger. We however also recognise that imports - in the long term - may place an effective upper bound on the merged entity's ability to raise price and restrict output to the domestic market. In this regard we note that the imposed behavioural conditions on the merged entity are for (an initial) period of 10 years (see condition 6 of the imposed conditions).

***Downstream distribution market***

75. Mining grade CMC is currently supplied to South African mining customers by Senmin, GMA, ChemQuest and Protea. ChemQuest and Protea, however, source their products from GMA and on-sell them to the relevant mines (also see paragraph 11.4 above). Murgatroyd's 2011 market share analysis confirmed that the CMC distribution market is highly concentrated with Senmin as the dominant player with a market share exceeding 50%.[59]

76. Furthermore, both Senmin and GMA tailor the CMC manufactured and supplied to them by CD to produce a range of depressants that are suitable for use by mines in

[58] Transcript pages 976 to 978.
[59] See RBB report, paragraph 55.

flotation. There are different methods or a combination of methods for tailoring the products and the two that were testified about can be generally described as "blending" and "reacting". Senmin tailors its Sendep products at CD's manufacturing facilities in terms of an arrangement with CD. GMA tailors its products at its own premises.

77. Although ChemQuest and Protea also supply CMC products to mining customers in South Africa they do not tailor depressants, i.e. they source and supply depressants tailored by GMA. Pretorius confirmed that ChemQuest does not compete with GMA. He stated that ChemQuest entered into a partnership/liaison which GMA around early 2011 that allowed it to sell "*GMA depressants into areas where GMA is not able to sell into*", which "*allowed ChemQuest to offer a full complement of flotation chemicals to its mining customers.*"[60] He further confirmed that ChemQuest currently cannot purchase CMC directly from CD since it does not have the resources and technical expertise required to make modifications to depressants to suit its customers.[61]

78. It was further common cause that because of the need for intermediation, mining customers will not switch to direct supply by international CMC manufacturers. Botha stated that "*[a]s a result of Senmin's extensive experience in the supply and use of reagent chemicals, customers generally regard Senmin as better able than they are to manage the chemical preparation and dosing (addition) to the froth flotation process.*"[62] This means that if mining customers switch CMC suppliers they will switch to a local CMC distributor. Post-merger, in the event of input foreclosure of GMA by the merged entity, such a distributor can only be the merged entity because ChemQuest and Protea do not tailor CMC products.

79. Thus, for all intents and purposes competition in the market for the distribution of CMC-based depressants to mining customers in South Africa takes place between Senmin and GMA. We however note that there was a dispute between the merging parties and the Commission regarding the existence, nature and strength of competition between these two distributors. We discuss this issue below.

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[60] Pretorius's witness statement, paragraph 30.
[61] Pretorius's witness statement, paragraph 34.
[62] Botha's witness statement, paragraph 8.3.

*Mining customers' perspective*

80. The evidence of the factual witnesses was clear and consistent on the score that the single most significant element that a mining customer would consider in its choice of alternative CMC suppliers/products in the flotation process is recovery.

81. We have in this regard specifically considered the evidence of Green of Lonmin as the only mining customer to testify at the hearing. As background to Lonmin's CMC usage, we note that Lonmin uses [a certain CMC product][63] from GMA and at present also uses [...] products at certain of its concentrator plants, a number of which are on VMS.[64] Green stated that the most important considerations for Lonmin in the choice of depressant are optimum recovery in the flotation process, as well as price (for similar performing CMCs) and then confirmed this in his oral evidence.[65] He stated that Lonmin "*would not choose a depressant that is cheap but poor on recovery*";[66] explained the considerations for choosing one depressant over another as follows: "*... the biggest reason we look at recovery, the advantage we get from the process by using a specific depressant. The secondary metric that we would use is pricing. So recovery would always outweigh, but there obviously is a point where we would definitely be influenced by pricing as well*";[67] and confirmed in cross-examination "*I said recovery first, price second, it is a secondary metric.*"[68] This means that even if the price of a particular CMC product increased significantly (say by 5% to 10%), a mine would not switch to a product of lower quality, i.e. a product that yields lower recovery (say of 0.5% less recovery), because the recovery loss would outweigh the price increase.[69]

82. The importance of recovery to their mining customers was also highlighted by Pretorius and Botha. Pretorius stated that "*[m]ines would generally be willing to stomach price increases for performance chemicals like depressants as the benefits*

[63] Certain information claimed as confidential by the merging parties or by third parties has been deleted from these reasons.
[64] Green's witness statement, paragraph 11.4. Also see transcript page 86.
[65] Transcript page 68.
[66] Green's witness statement, paragraph 13.
[67] Transcript page 67.
[68] Transcript page 110.
[69] See, for example, transcript page 134.

*of having a better performing depressant would far outweigh the costs involved.*"[70] Botha stated that "*[a]lthough differences in rates of recovery are small, the financial benefit to the mines of these small increases in efficacy can be very significant.*"[71]

83. As noted above, Green further testified that price is an important consideration for a mine when deciding whether or not to switch between similar performing CMC's in respect of a particular ore body. He stated that "*Lonmin is sensitive to the price of reagent chemicals. If it has a choice between two suppliers with a similar product offering (safety, quality, etc.), it prefers to purchase from the cheaper supplier. Any increase in the price of chemical reagents is considered material, and may trigger a switch to an alternative supplier.*"[72] He further testified that "*we are very ... very price orientated ...*";[73] and "*with the low pricing of the precious metals at this point in time we need to be careful of high costs, so we need to drive cost down and again it is in the tough position we are in right now we need prices to be as low as possible to maintain profit levels.*"[74]

84. Botha, in relation to the performance/price debate, stated that "*[m]ining companies are accordingly willing to absorb the increased cost of a better performing chemical because its benefits far outweigh its additional cost.*"[75] Botha further held the view that "*it is for this reason that the prices of Senmin CMC products are significantly higher prices than those of its competitors.*"[76] He went on to say that "*Senmin firmly believes that, in most instances, its products will achieve better results than GMA's and Protea's CMC products, and the higher price of Senmin's products is justified on that basis.*"[77]

85. However, there was no customer testimony to collaborate Botha's averments regarding Senmin's CMC products being "*better performing*" and achieving "*better results*" for its mining customers compared to the products of its competitor(s). To

[70] Pretorius's witness statement, paragraph 47.
[71] Botha's witness statement, paragraph 7.4
[72] Green's witness statement, paragraph 17.
[73] Transcript page 99.
[74] Transcript page 101.
[75] Botha's witness statement, paragraph 7.4.
[76] Botha's witness statement, paragraph 7.4.
[77] Botha's witness statement, paragraph 7.7.

the contrary, Lonmin (as highlighted, the only customer who gave evidence at the hearing) rejected this notion. If Senmin, as alleged, indeed had better performing CMC products than other market participants it could have put up a mining customer as a witness to confirm this, which it did not. Thus we do not accept Botha's averments of Senmin products being of a better quality and higher performing than that of GMA.

86. With regards to the issue of substitutability, Murgatroyd suggested that the CMC distribution market is characterised by such a significant degree of product and service differentiation that there is, accordingly, limited competition between the CMC distributors.[78] More specifically, the merging parties contended that Senmin's CMC products are differentiated from that of GMA to the extent that they do not compete against each other. As evidence of this the merging parties referred specifically to a divergence in price over time between Senmin's CMC product offering and the GMA products, with emphasis on the nature and extent of the divergence over time.

87. However, from the outset we note that the question of the substitutability of different CMC products can only reliably be answered by the users, i.e. the mining customers of such products. As repeatedly emphasised in these reasons, Green of Lonmin was the only mining customer that gave evidence at the hearing. Green's evidence was that the CMC products that Lonmin purchases from Senmin and GMA are substitutable from a quality perspective, depending upon the ore body of the mine. He stated that "*[i]t is not correct in my experience to say that [the GMA product] and Sendep are significantly differentiated and not substitutable*";[79] and "*[i]t would, in my view, be difficult to conclusively say which one of the different depressants sold by Senmin and GMA is comparatively best.*"[80] He further confirmed this in his oral evidence. He testified that Lonmin tested both Senmin's Sendep 30F and [a specific GMA] product at its Roland Concentrator and found no real difference in recovery.[81] Botha could not dispute this.[82] Green further stated that "*I can tell you that we can substitute between [the GMA product] and 30F quite*

[78] See RBB report *inter alia* paragraph 184.
[79] Green's witness statement, paragraph 24.
[80] Green's witness statement, paragraph 25.
[81] Transcript page 82.
[82] Transcript pages 846 and 847.

*easily. It has been detected that 30D we have for instance a test on the go right now whether we should continue 30D or convert to 30F and maintain certain plants on [the GMA product], so a real comparison is between 30F and [the GMA product].*"[83] In cross-examination he maintained "*I would agree ... to the extent that 30F and [the GMA product] gives similar recoveries.*"[84]

88. With regards to Senmin's 30D product Green testified that "*[w]ell 30D we haven't proven it, we are in the process of testing as I say but we believe we can get a percent increase in recovery for sticking with [the GMA product] and with 30F in certain concentrators versus 30D.*"[85] He was of the initial view that "*the 30F is the better one of the 30D and 30F, 30F is the better depressant*";[86] and "*we had a choice between 30F and 30D. 30F has proven to be the better reagent, it is proving to be a better reagent*"[87] but later said that "*we [Lonmin] are busy doing test work on the 30D in particular in comparison with 30F and [the GMA product]*";[88] "*it would be unfair of me to say categorically that 30D is definitely worse than 30F but as I say we are busy investigating that*";[89] and "*what I am saying is that of late we have detected maybe deterioration and which we are investigating. So I will not for this tribunal at this point in time be able to put that down as pure fact because it is within investigation. What we will do from our side is we will continue the work with Senmin of the 30D to establish exactly where we are with that.*"[90]

89. We note that the relevant issue is not the differences between the CMC products that Senmin supplies to Lonmin (i.e. Senmin's 30D and 30F products), but the customer's view of the substitutability of the CMC products supplied by respectively Senmin and GMA.

[83] Transcript page 83.
[84] Transcript page 135.
[85] Transcript page 83.
[86] Transcript page 109.
[87] Transcript page 111.
[88] Transcript page 191.
[89] Transcript page 195.
[90] Transcript page 193.

90. In conclusion: Green considered the relevant Senmin product (i.e. Sendep 30F) and the GMA supplied CMC product to be substitutable - despite them having different characteristics.[91]

91. With regards to the available price data on the CMC offerings of respectively Senmin and GMA, it was common cause that there is a significant price differential between the Senmin offering on the one hand and the GMA offering on the other hand. This was confirmed *inter alia* by Green.[92]

92. We however note that evidence of price differences (even if used for comparable product offerings) is not conclusive on the issue of substitution.

93. Furthermore, important in this case is that the price data relied on by the merging parties were misleading since it related to different product offerings by respectively Senmin and GMA. The Senmin CMC price data relied on namely included certain equipment costs,[93] which equipment is not provided by GMA to its mining customers and therefore is not factored into its CMC prices. Green explained that at Lonmin's VMS operated concentrator plants, Senmin supplies both the CMC itself and the equipment needed to store and mix the CMC.[94] He stated "*[t]he VMS package is such that Senmin provides CMC storage equipment and feeding equipment*";[95] "*Senmin provides mixing systems and dispersing systems that are managed well. They control delivery and feeding, making sure that everything works well*";[96] "*VMS gives you the ability, it gives you people and it gives you a plant which had you not had you would have to put up yourself and you would have to staff yourself*";[97] and "*[i]n terms of the VMS agreements with Senmin however, Lonmin is not charged any additional amount for the equipment supplied by Senmin in the price for the products.*"[98] Green further said that the value of this equipment "*goes into the order of millions.*"[99] Green further noted that the Senmin supplied equipment

[91] Transcript pages 515, 516, 173 and 196.
[92] Green's witness statement, paragraph 27. Also see transcript page 94.
[93] See, for example, transcript pages 817 and 818.
[94] Green's witness statement, paragraph 22.
[95] Green's witness statement, paragraph 33. Also see transcript page 90.
[96] Green's witness statement, paragraph 35.
[97] Transcript page 144.
[98] Green's witness statement, paragraph 28.
[99] Transcript page 142. Also see transcript page 199 for a quantification of the cost of this equipment.

reduces Lonmin's capital costs: "*VMS offered an attractive opportunity to reduce capital costs as Senmin offered to purchase and install new CMC equipment.*"[100]

94. The merging parties submitted that Senmin effectively amortizes the cost of its VMS services and equipment across all of its sales. Botha confirmed that the cost of chemicals purchased from Senmin does not vary depending on whether or not the customer has purchased equipment from Senmin or has requested Senmin to apply a service and/or equipment. However, despite mining customers' possible perception that these services are provided for free,[101] Botha conceded that vendor management is "*a real cost. So whether I have vendor management in there or sales cost generally to all the customers that cost line is in there.*"[102] As noted in paragraph 7 above, the majority of Senmin's CMC sales take place through VMS.

95. The cost of the equipment and services provided by Senmin must be recovered and is factored into its pricing. The costs which are not common to both Senmin and GMA could be one potential explanation for the (growing) price differences between the Senmin and GMA product offerings over time. We have no data available from Senmin with regards to the costs applying only to Senmin and its calculation over time.

96. Furthermore, from a mining customer's perspective a price comparison between the Senmin and GMA product offerings is further complicated by differences in the volumes of CMC used in the flotation process. Green stated that "*[i]n the flotation process, Lonmin generally uses more [...], compared to [the GMA product]. Because we use more [...], it may further increases it's (i.e. [...]) cost relative to the GMA products.*"[103] On the other hand, Senmin's VMS service offering reduces wastage at the mine and thus mining customers' total costs. According to Green "*[t]he main attraction for Lonmin to have VMS is in the reduced wastage associated with the VMS management technique, which represents a significant cost saving.*"[104] Green further testified that "*[t]he vendor management what it brings to us ... is the saving in wastage which we had high wastage and the ability for Senmin to*

[100] Green's witness statement, paragraph 23.
[101] Transcript page 935.
[102] Transcript page 936.
[103] Green's witness statement, paragraph 29.
[104] Green's witness statement, paragraph 36.

*help us with capital expenditure as far as putting up reagent handling systems.*"[105] Murgatroyd summarised the economic value of VMS as follows: "*I think it has been accepted and is now common course (sic) [cause] that VMS includes a value added service, Green also acknowledges that, above and beyond the free equipment that one gets.*"[106]

97. It was clear from Green's testimony as a mining customer that the fact that Senmin provides certain equipment and other services that GMA does not provide, complicates a direct comparison of the CMC prices of these two distributors from a total cost to mine perspective. However, Lonmin nevertheless considers these two players to be alternative CMC suppliers despite the differentiated product/service offering. Green stated "*[a]gain I think I have stated that the Sendep product is more expensive and we use as far as grams per ton, it is higher dosage rate than the general [GMA product]. So it is more expensive but as I have stated we have the VMS in place in certain concentrators and we also have a no prove (sic) that we have detrimental recovery issue by using that product.*"[107] The following paragraph summarises Green's perspective: "*[s]o there is a play off between the capex, the operating cost as well as what vendor management brought to us as an advantage and we didn't know all the advantages that would come to be. Saving on wastage was certainly a big one and as I have stated in my initial questioning is that we are now ... seriously reviewing [...] specifically and seriously looking at the advantages of price wise of [the GMA product] versus [...].*"[108]

98. Furthermore, although Botha continuously stated that Senmin does not consider GMA as a competitor,[109] evidence in Senmin's management minutes indicated that Senmin does consider how its prices compare to the prices of a competitor[110] in the downstream market.[111] With regards to this price comparison Botha stated "*if we go to a mine and present our products and the test work and the mine says you are too expensive then we are naturally feeling that the benefit is too high and the team will*

[105] Transcript pages 115 and 116.
[106] Transcript page 1497.
[107] Transcript page 94.
[108] Transcript page 116.
[109] Transcript pages 823 to 828.
[110] In this case the price comparison is to ChemQuest.
[111] Record page 2050.

*report that the prices will be too high*".[112] Senmin's internal documents also revealed that it perceives GMA as a downstream competitor. A Directors' Report of May 2011 states: "*Senmin is achieving margins in excess of [...]% and is priced considerably higher than our competitor who purchases from the same source*".[113] Botha under cross-examination conceded that Senmin's competitors would include ChemQuest and Protea, but also GMA.[114] Botha stated "*[t]he competitor that we directly compete with in the market place is ChemQuest and Protea*";[115] "*[t]he competitors we compete against is also Protea and is also ChemQuest*"[116] and "*GMA would definitely be a competitor as we see it at Lonmin ....*"[117] However, as already noted, ChemQuest and Protea source their CMC products from GMA.

99. Botha further conceded that mining customers may perceive the products of Senmin and GMA to be competing in the market as is evident from the following exchange between the Commission's counsel and Botha:

> "*MR MAENETJE:* *So you are saying from a customer perspective there may be a perception that your [Senmin and GMA's] products compete by the example you have given of Anglo Plats?*
>
> *MR BOTHA:* *Yes ....*"[118]

100. In conclusion: the evidence relating to the available price data is inconclusive with regards to the substitutability of the CMC products supplied by respectively Senmin and GMA. Senmin's prices to its mining customers are likely to be influenced by the equipment and services that it provides and the importance of their components over time. There is furthermore no mining customer evidence that suggests that the Senmin produced CMC based depressants have any special technical capability that makes its product superior or functionally distinct to that produced by GMA. In contrast to this, albeit that there is product differentiation between Senmin's Sendep products and GMA's CMC products in terms of their

[112] Transcript page 869.
[113] Record page 656.
[114] Transcript pages 852 to 857.
[115] Transcript page 855.
[116] Transcript page 856.
[117] Transcript page 856.
[118] Transcript page 825.

molecular architecture and anionic character, the direct evidence of the only mining customer to testify was clear on the score that it considers the Senmin and GMA products to be substitutable from its perspective.

**Ability and incentive to foreclose**

101. We have concluded that CD is the monopoly producer of technical grade CMC in South Africa and that Senmin is the dominant distributor of technical grade CMC products to mining customers in South Africa. Currently the only true competitor to Senmin at the technical grade CMC distribution level is GMA. We further note that the technical grade CMC supplied by CD to GMA forms the base in the majority of GMA's CMC products and is therefore a significant input to GMA.[119]

102. With regards to potential CMC imports, it was clear that any potential imported CMC product would first need to be tested to determine that it is of acceptable specification and quality, followed by laboratory and plant tests before a mining customer would use such product. Green confirmed that switching between alternative suppliers of CMC would take a considerable period of time if the products of a specific supplier have not already been tested by the mine. Green stated "*we test all reagents and all bodies through that plant. Once we have established that the reagent might be worthwhile looking at as far as recovery, we would then choose one of the concentrators to test it on for a period of time. Normally that would be not less than a three month period. So it could be anything from three months to a year that would test on that concentrator. Only once where we established that there is an improvement in recovery, would we further the test work to another concentrator and then implement it through other concentrators. So it is a process we go through, it is quite a long process. In my experience the shortest period would be a year in total.*"[120]

103. This was further confirmed by Botha and Nielson. Botha stated that one would need to test any imported product and, if found to work, go through trials before a mine could take it on.[121] Nielson stated that for a distributor such as GMA, the process of competing for a new client can take six to twelve months from the point

[119] Transcript page 69.
[120] Transcript page 69.
[121] Transcript pages 977 and 978.

at which testing is first undertaken, through to the development of chemical modifications and further testing, until the point at which the client is placing bulk orders for the chemical concerned in order to use it in its flotation process.[122]

104. None of the potential imported CMC from three different sources that the merging parties contended were equivalents to that currently supplied by CD to GMA have been tested for quality (i.e. recovery) at the South Africa mines (see paragraph 73 above).

105. It was further evident that the security of continued CMC supply is of paramount importance to a mining customer. A mine requires continuous platinum production and thus uninterrupted CMC supply. Green's testimony was clear on the absolute need for security of supply. He confirmed that in one instance Lonmin placed a supplier[123] on notice on the strength of a possibility that supplies may be disrupted, even before supplies were in fact disrupted.[124]

106. The evidence, on balance, has shown that GMA, as the only other significant local CMC blender and distributor (besides Senmin), is unlikely to defeat a post-merger foreclosure strategy by replacing the CMC current purchased from CD with a viable imported product of both an acceptable quality and a competitive local price. Furthermore, there is no evidence of alternative sources of competitive constraints that would remain unaffected by a post-merger foreclosure strategy of the merged entity. We have thus found no credible evidence of imports or other factors as a post-merger constraint on the ability of the merged entity to foreclose rival distributors of CMC, in particular GMA.

107. The merging parties however contended that any foreclosure strategy by the merged entity would be unprofitable and thus self-defeating because the merged entity would not be able to divert to itself a sufficient percentage of its sales lost by GMA downstream. This contention of the merging parties depended in large measure on the credibility of import competition in technical grade CMC and on the extent of the differentiation downstream that they contended will hinder any significant diversion of the lost sales.

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[122] Nielson's witness statement, paragraph 31.
[123] I.e. a grinding media (the steel ball or steel rod used in mills) supplier.
[124] Transcript pages 77 and 78.

108. However, as concluded above, on both the above-mentioned scores we have found no credible evidence in support of the merging parties' case. We have already dealt with potential imports above. The merging parties theory that the CMC products and services sold and provided by Senmin, on the one hand, and GMA (and Protea and ChemQuest) on the other, are so differentiated that it is extremely unlikely that sufficient numbers of mines, faced with the prospect that they could no longer secure alternative sources of CMC product, would switch to a Senmin product, was not substantiated by mining customer evidence.

109. We note that we have found the economic experts' hypothetical diversion analysis to be unhelpful in making a conclusive finding on the merged entity's post-merger incentive to foreclose. Murgatroyd testified that the diversion calculations and analyses posited by Truen, being based on gradual/partial foreclosure, are unhelpful to the Tribunal since it is unlikely to be a sufficiently good approximation to be probative of the necessary levels of diversion.[125] Murgatroyd agreed that the Tribunal should consider the factual evidence to determine the likelihood of diversion.[126]

110. We have considered the fact that there has been some switching over time by mining customers between alternative CMC distributors. Although this switching is limited, it must be seen in the context that: (i) mining customers require continuous production and therefore are highly sensitive to any possible disruptions in the supply of CMC; (ii) mining customers are highly quality sensitive and quality is perceived as recovery performance, which is the single most important determinant in the choice of a CMC supplier/product; (iii) mining customers cannot rapidly switch to an untested CMC product; and (iv) cost (i.e. price) is a further consideration for a mining customer in the case of similarly performing CMC products. One therefore would not expect frequent customer switching or churn in this market. This however does not imply that GMA (and ChemQuest and Protea), as potential alternative CMC suppliers to mining customers, do not constrain Senmin in its CMC pricing and other competitive decisions.

[125] Transcript pages 1484 to 1487.
[126] Transcript page 1619.

111. We have highlighted mining customers' need for a continuous and secure supply of CMC (see paragraph 64 above). Given the customers' absolute need for security of supply, in the event of even partial post-merger foreclosure, continued security of supply will be in issue and a mining customer would consider switching, i.e. finding an alternative and secure CMC supply source. Therefore the mere knowledge by a mining customer that GMA (or another potential downstream CMC supplier) may post-merger face possible supply disruptions would result in the customer taking steps to find an alternative and secure source of CMC supply, which only the merged entity would be able to offer in South Africa. Mining customers would be aware that Senmin, as a post-merger vertically integrated company, would have a stable and secure local source of CMC inputs.

112. Furthermore, in a hypothetical situation where suitable imported CMC inputs were available to say GMA, a mining customer could still insist on subjecting any new GMA products to tests, and in the meantime turn to the next best available alternative which would be a Senmin product as currently exists or as adapted or innovated to meet the specific customer's requirements. Given the highly concentrated nature of the industry we don't see how GMA would be able to hide the fact from its customers if it replaces the CMC inputs currently purchased from CD with an imported product. Customers would soon enough learn of this fact. This was confirmed by Green. He was asked what Lonmin would do if GMA came to it and say that it is not able to guarantee supply for the coming month. Green responded as follows: "*Again you would look at the next best reagent; depressant which is a Sendep product, Sendep 30F is probably the next best. It would be critical to the operation this is one of the - well the depressants being one of the critical reagents to the reagent suite. I would say it is easier to look at other commodities and give notice and get alternative supply to what it is to reagents, reagents are very specific.*"[127] Green was further asked to comment on a hypothetical scenario where GMA were to say to Lonmin that it cannot confirm supply for the next month but that it will be sourcing the equivalent of [the product supplied by CD to GMA] from China in the second month and supply that to Lonmin. Green's response was as follows: "*We could not accept that because we don't know what the replacement depressant really is. It is stated it is like competitive or equal*

[127] Transcript page 78.

*to [the currently supplied GMA CMC product] but we would have to test the reagent to ensure that it is the same product.*"[128] He then went on to say that this testing would not take less than a year.[129]

113. The merging parties are aware of the above competitive advantages in the context where they post-merger short supply GMA.

114. It was further common cause amongst the factual witnesses that both Senmin and GMA provide flotation testing and modification services to their South African mining customers. Botha emphasised the importance of managing the chemical preparation and dosing to the froth flotation process. He stated that froth flotation is a complex process and that small variations in the characteristics of the chemicals used, and the quantity and concentration of those chemicals, can have a very significant effect on the recovery of a mineral from ore. He went on to say that the process is further complicated by the fact that the characteristics of the ore will also impact significantly on the effect of these variations. He stated that as a result of Senmin's extensive experience in the supply and use of reagent chemicals, customers generally regard Senmin as better able than they are to manage the chemical preparation and dosing (addition) to the froth flotation process.[130] Nielson indicated that in performance chemicals such as CMC, "*it may also be desirable to undertake alterations to the CMC to achieve the desired flotation result.*"[131] Ferrari stated that the technical work to modify the CMC to match the performance requirements of a particular ore body has always been quite complex due mainly to the nature of care and efficiencies required for the CMC supplied to South African mines, which requires expert modifications. This he stated is what has driven Lamberti to cooperate with local companies such as GMA that have the ability and experience in terms of flotation testing and assisting in the selection of the product and effecting the modifications required to meet the specific customer's needs.[132]

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[128] Transcript page 93.
[129] Transcript page 94.
[130] Botha's witness statement, paragraph 8.3.
[131] Nielson's witness statement, paragraph 29.
[132] Ferrari's witness statement, paragraph 22.

115. There is not only the practice of continuous adaptation of CMC products to meet (new) mining customers' needs, but also ongoing product innovation.[133] As stated in the rationale for the proposed transaction (see paragraph 14 above), Senmin specifically submitted that it wishes to further develop the technology in its CMC products through the proposed deal. There is thus no reason to suppose that in the event of a post-merger foreclosure strategy, the merged entity would not be able to adapt its products, or to innovate in order to meet the requirements of mines that were GMA customers pre-merger.

116. From a mining customer perspective, Green confirmed that in the case of Lonmin there is on-going testing of competitor CMC products. Where the mine had in the recent past tested any of Senmin's CMC products it therefore would be relatively easy to switch to a Senmin product in the event of a post-merger foreclosure strategy.[134] There is no other customer evidence to counter this.

117. *Inter alia* the highly concentrated nature of both the upstream and downstream relevant markets; the specific demand characteristics of a mining customer; Green of Lonmin's view of the CMC products of respectively Senmin and GMA; the evidence that (potential) imported CMC is not a real alternative to local CMC supply by CD in terms of it being of both an acceptable quality (i.e. a functional substitute) and having a competitive price (i.e. an economic substitute); the continuous adaptation of CMC products to mining customers' needs; the ongoing product innovation and testing of products; as well as the lack of customer evidence that the CMC products of Senmin and GMA are significantly differentiated, lead us to conclude that the merged entity would have the ability to foreclose downstream rivals, that diversion is likely and that a post-merger foreclosure strategy would be attractive to the merged entity.

118. Pre-merger the existence of GMA provides mining customers with a choice between two alternative CMC distributors. Senmin in its internal documents acknowledges the risk that mining customers might want to have a competitor in the

[133] See, for example, Shannon's testimony at pages 1107 to 1111 of the transcript. Also see Nielson's testimony at page 604 of the transcript.
[134] See Green's testimony at transcript page 78.

market,[135] and that it tracks the pricing of competitor(s) (see paragraph 98 above). In the event that GMA is foreclosed, mining customers would thus not have a choice of competitors at the distribution level, which will reduce their bargaining position against the merged entity, which leaves the merged entity unconstrained to increase prices or to reduce quality. Competition in terms of quality of CMC performance enhancements is likely to be hindered, as the only other firm offering performance enhancements, i.e. GMA, would be foreclosed. This is likely to reduce the rate of technological improvement in the CMC market, which may affect mining yields in the mining sector in the long run.[136]

119. We therefore conclude that the merged entity will have both the ability and incentive to foreclose rivals in the downstream market for the distribution of CMC. These potential anti-competitive consequences of the proposed merger are significant and justify the imposition of conditions to remedy the concerns.

**Conditional approval**

120. As noted in paragraph 24 above, the Commission during closing argument suggested that the merging parties' tendered set of conditions contained certain weaknesses. Consequently the Tribunal requested the Commission to submit written comments with regards to these weaknesses. We shall not deal with these written comments of the Commission in any detail in these reasons, save to say that the merging parties after further correspondence accepted a number of the Commission's suggested enhancements and included them in their final set of tendered conditions, which we have imposed. We have also imposed an additional condition on the merging parties (i.e. a condition that they did not tender) that relates to the ability of the Commission to effectively monitor the merged entity's compliance with the pricing provisions of the remedy (see condition 5.3).

121. The imposed set of conditions guarantee the supply by the merged entity of an annual minimum quantity of CMC to GMA (see condition 1 of the imposed conditions), at an equivalent quality and specifications as currently supplied (see condition 1.2), together with a pricing formula for calculating the maximum price of

[135] Minutes of meeting of the Board of Directors of 13 May 2010; record page 907. Also see transcript pages 912 to 915.
[136] See the DNA Economics Report, paragraph 81.

supply (see conditions 2.1 to 2.3). The conditions also cater for the supply of CMC, under certain circumstances, to players other than GMA on non-discriminatory terms (see condition 1.3). Furthermore, if notified of a CMC price increase, a customer shall be entitled to request independent verification of the associated cost increases from an auditor (see conditions 2.4 to 2.7). The imposed set of conditions further provide for specific conditions relating to *inter alia* supply volume adjustment, production stoppages and supply interruptions or shortages and independent verification thereof (see condition 3); regular testing by the merged entity to maintain CMC product specifications (see condition 4); as well as a number of reporting and monitoring conditions (see condition 5).

122. We are satisfied that the conditions that we have imposed adequately address and are proportional to the identified post-merger input foreclosure concern. We note that Green, as the only mining customer to testify at the hearing, was in principle satisfied with a CMC supply condition that post-merger would maintain the pre-merger status quo, i.e. two CMC distributors (i.e. Senmin and GMA) in the market.[137]

**CONCLUSION**

123. We concur with the Commission's finding that the proposed transaction, from a vertical perspective, is likely to substantially prevent or lessen competition in the relevant market. However, this concern of post-merger likely input foreclosure of CMC distributors, specifically GMA, is adequately addressed by the behavioural conditions imposed on the merged entity. We therefore approve the proposed merger subject to the conditions as per the attached "**Annexure A**".

07 February 2013
**ANDREAS WESSELS** **DATE**

**Merle Holden concurring**

Tribunal researcher: Ipeleng Selaledi
For the merging parties: Adv J Wilson with G Marriott
For the Commission: Adv N H Maenetje SC with H Rajah

[137] Transcript page 162.