



MEDIA RELEASE

26 May 2022

CCCS clears Proposed Acquisition by Entegris, Inc, of CMC Materials, Inc.

1. The Competition and Consumer Commission of Singapore (“**CCCS**”) has cleared the proposed acquisition by Entegris, Inc. of all shares of CMC Materials, Inc. (collectively, the “**Parties**”) (the “**Proposed Transaction**”).
2. Following its assessment, CCCS has concluded that the Proposed Transaction, if carried into effect, will not infringe the section 54 prohibition of the Competition Act 2004 (the “**Act**”).

Background

3. CCCS accepted a joint notification from the Parties on 2 March 2022 for a decision on whether the Proposed Transaction would infringe section 54 of the Act, which prohibits mergers that have resulted, or may be expected to result, in a substantial lessening of competition (“**SLC**”) within any market in Singapore.
4. Entegris, Inc. is a global developer, manufacturer and supplier of micro-contamination control products, specialty chemicals and materials handling solutions for manufacturing processes in the semiconductor and other technology industries.¹ Entegris, Inc. operates in three business segments: Specialty Chemicals and Engineered Materials, Advanced Materials Handling and Micro-contamination Control and engages in the same business segments in Singapore as it does globally.
5. CMC Materials, Inc. is a global supplier of consumable materials to semiconductor manufacturers and pipeline companies.² CMC Materials, Inc. operates in two business segments: Electronic Materials and Performance

¹ Entegris, Inc. is a stock corporation incorporated in Delaware, United States, and is listed on NASDAQ under the ticker “ENTG”.

² CMC Materials, Inc. is a stock corporation incorporated in Delaware, United States, and is listed on NASDAQ under the ticker “CCMP”.

Materials and engages in the same business segments in Singapore as it does globally.

6. The Parties overlap in the supply of chemical mechanical planarization (“**CMP**”) slurries (“**CMP Slurries**”)³ and cleaning solutions (“**Cleans**”) globally and in Singapore. Entegris, Inc primarily supplies formulated Cleans⁴ while CMC Materials, Inc. primarily supplies commodity Cleans⁵ and a limited amount of formulated Cleans. Entegris, Inc also supplies drums⁶, accompanying fluid transfer products⁷, and liquid filters⁸ to CMC Materials, Inc. for the downstream delivery or manufacture of CMP Slurries and Cleans. The Parties supply products that are complementary i.e., CMP Slurries, Cleans and CMP pads⁹.

CCCS’s Assessment

7. CCCS conducted a public consultation from 10 March 2022 to 23 March 2022, and contacted 58 stakeholders including competitors and customers.

Relevant Markets Affected by the Proposed Transaction

8. CCCS considered that the relevant markets for the purpose of assessing non-coordinated and coordinated effects are the global supply of:

- (a) CMP Slurries; and
- (b) formulated Cleans.

9. CCCS also considered that the relevant markets for the purpose of assessing vertical effects are the global supply of:

- (a) drums¹⁰ and liquid filters (each as an upstream market); and

³ CMP Slurries are liquid dispersions containing active chemicals and micro abrasive grains used in the CMP process to polish the surface of the film deposited upon the silicon wafer in the manufacturing of semiconductors.

⁴ Formulated Cleans are chemical formulations specifically engineered to accomplish specialised removals during the cleaning process.

⁵ Commodity Cleans (also referred to as “bulk wet chemicals”) are basic chemistries or simple blends thereof used for a number of non-specialised purposes, including non-semiconductor applications such as cleaning hard disk drives.

⁶ Drums are containers used to store and transport fluids including e.g., chemicals, mineral oils and other liquids used in different industries such as food, life sciences, semiconductor, LED, water treatment and flat panel display.

⁷ Fluid transfer products are typically used in conjunction with drums to perform the function of fluid transfer and handling for the purposes of chemicals manufacturing.

⁸ Liquid filters are equipment used to separate suspended particles from a fluid stream by the filter medium. The objective of the filtration process is to allow liquid stream to pass through while unwanted particles are retained.

⁹ CMP pads are flat, disk-shaped surfaces against which silicon wafers are pressed in order for the silicon wafers’ surfaces to be polished.

¹⁰ For the purpose of the vertical effects assessment of the Proposed Transaction, this refers to drums used to store and transport wet chemicals such as CMP Slurries and Cleans.

- (b) CMP Slurries, formulated Cleans and commodity Cleans (each as a downstream market).

Competition Assessment

10. CCCS found that the Proposed Transaction is unlikely to lead to non-coordinated¹¹ and coordinated effects¹² that would result in a SLC in the relevant markets for CMP Slurries and formulated Cleans for the following reasons:
 - (a) The combined market share of the merged entity and the post-merger combined market share of the three largest firms do not cross the indicative thresholds.¹³ The incremental market shares of the merged entity are low for each relevant market;
 - (b) The Parties are not each other's closest competitors in each relevant market. There are other viable alternative suppliers of CMP Slurries and formulated Cleans and customers source from multiple suppliers;
 - (c) Barriers to entry and expansion of each relevant market are at most likely to be moderately high and do not appear to be insurmountable in view of the presence of multiple suppliers;
 - (d) Larger customers of the Parties are likely to have countervailing buyer power; and
 - (e) Given that the Proposed Transaction will not significantly increase concentration in the relevant markets, some customers would have countervailing buyer power, and outcomes of bidding processes are typically not made known to other bidders, suppliers are unlikely to be able to collude easily.
11. CCCS found that the Proposed Transaction is unlikely to give rise to vertical effects¹⁴ that would result in SLC in the relevant upstream market of drums and

¹¹ "Non-coordinated effects" may arise when there is a loss of competition between the merging parties and the merged entity finds it profitable to raise prices or reduce output, quality or innovation. Further elaboration of non-coordinated effects can be found in paragraphs 6.4 to 6.15 of the *CCCS Guidelines on the Substantive Assessment of Mergers*.

¹² "Coordinated effects" may arise if the merger raises the possibility of firms in the market coordinating their behaviour to raise prices or reduce quality, output or innovation. Further elaboration of coordinated effects can be found in paragraphs 6.16 to 6.28 of the *CCCS Guidelines on the Substantive Assessment of Mergers*.

¹³ Paragraph 5.15 of the *CCCS Guidelines on the Substantive Assessment of Mergers*.

¹⁴ Vertical effects may arise when the competitive constraints faced by the merged entity is reduced by, for example, the merged entity restricting downstream rivals' access to a necessary input or restricting upstream rivals' access to customers. Further elaboration can be found in paragraphs 7.3 to 7.23 of the *CCCS Guidelines on the Substantive Assessment of Mergers*.

liquid filters or each downstream market of CMP Slurries, formulated Cleans and commodity Cleans for the following reasons:

- (a) Input foreclosure is unlikely to arise because Entegris, Inc. does not appear to be a significant supplier of drums or liquid filters for the delivery or manufacture of CMP Slurries and Cleans and there exists other alternative suppliers for customers to switch to. Further, barriers to entry and expansion and switching for such drums and liquid filters do not appear to be insurmountable and these products are unlikely to be significant input costs for the supply of CMP Slurries and Cleans; and
 - (b) Customer foreclosure is unlikely to arise as CMC Materials, Inc. is not a significant buyer of drums and liquid filters for the delivery or manufacture of CMP Slurries and Cleans.
12. CCCS also found that the Proposed Transaction is unlikely to give rise to conglomerate effects¹⁵ that would result in a SLC in Singapore given that the merged entity does not have significant market power in each relevant market of CMP Slurries, formulated Cleans and CMP pads, none of these products are typically purchased or sold together as a bundle, and third parties are generally able to switch to alternative suppliers.
13. Further information on the notification and CCCS's Grounds of Decision will be made available in due course on CCCS's [Public Register](http://www.cccs.gov.sg) at www.cccs.gov.sg.

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¹⁵ Conglomerate effects may arise in mergers between parties in closely related markets, for example, when the combination of products in related markets leads to the merged entity reducing its rivals' abilities to compete through conduct such as bundling. Further elaboration can be found in paragraphs 7.24 to 7.34 of the *CCCS Guidelines on the Substantive Assessment of Mergers*.

About The Competition & Consumer Commission of Singapore (CCCS)

The Competition and Consumer Commission of Singapore (“**CCCS**”) is a statutory board of the Ministry of Trade and Industry. CCCS administers and enforces the Competition Act 2004, which empowers CCCS to investigate and adjudicate anti-competitive activities, issue directions to stop and/or prevent anti-competitive activities and impose financial penalties. CCCS is also the administering agency of the Consumer Protection (Fair Trading) Act 2003 or CPFTA which protects consumers against unfair trade practices in Singapore. Our mission is to make markets work well to create opportunities and choices for businesses and consumers in Singapore.

For more information, please visit www.cccs.gov.sg.

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