

***Case No COMP/M.5484 -
SGL CARBON /
BREMBO / BCBS / JV***

Only the English text is available and authentic.

**REGULATION (EC) No 139/2004
MERGER PROCEDURE**

Article 6(1)(b) NON-OPPOSITION
Date: 27/05/2009

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COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 27.5.2009
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In the published version of this decision, some information has been omitted pursuant to Article 17(2) of Council Regulation (EC) No 139/2004 concerning non-disclosure of business secrets and other confidential information. The omissions are shown thus [...]. Where possible the information omitted has been replaced by ranges of figures or a general description.

PUBLIC VERSION

MERGER PROCEDURE
ARTICLE 6(1)(b) DECISION

To the notifying parties

Dear Sir/Madam:

**Subject : Case No. COMP/M.5484 – SGL CARBON / BREMBO / BCBS / JV
Notification of 17.04.2009 pursuant to Article 4 of Council Regulation
No 139/2004¹**

I. INTRODUCTION

1. On 17 April 2009, the Commission received a notification of a proposed concentration pursuant to Article 4 of Council Regulation (EC) No 139/2004 by which the SGL Carbon SE ("SGL Carbon", Germany) and Brembo S.p.A. ("Brembo", Italy) controlled by Nuova Fourb S.r.l. ("Nuova Fourb", Italy) acquire within the meaning of Article 3(1)(b) of the Council Regulation joint control of Brembo Ceramic Brake Systems S.p.A. ("BCBS", Italy) by way of purchase of shares.

II. THE PARTIES AND THE CONCENTRATION

2. **SGL Carbon** is a manufacturer of carbon-based products. It has a comprehensive product portfolio, which includes: (i) carbon fibres and (ii) brake discs. The SGL Carbon group has 41 production facilities throughout the world.
3. **Brembo** is a manufacturer of brake products for cars, motorbikes, commercial vehicles, and racing cars. Products include brake discs and brake callipers. Brembo operates in 14 countries around the world.

¹ OJ L 24, 29.1.2004 p. 1.

4. **Brembo Ceramic Brake Systems ("BCBS" - the JV)** – BCBS is currently active in the development and production of carbon-ceramic brake discs and systems for high-performance vehicles. After the transaction BCBS, the JV, will be active in the development of carbon-ceramic brake systems and sale of carbon-ceramic brake discs for cars and light commercial vehicles. In particular, the JV will combine Brembo's ceramic brake business and SGL's brakes business. It is intended to exploit the synergies resulting from the transaction and to increase capacity and production volume of the existing plants with the aim to erect [...] mass production and sale of carbon-ceramic brake discs.
5. The JV will be established in three main steps:
 - In the first step, SGL Carbon will acquire 50% of the shares in **BCBS**. The acquisition will be effected by means of a capital increase, in which only SGL Carbon (via wholly owned subsidiaries(s)) will participate.
 - In the second step, SGL Carbon and Brembo will make cash contributions into BCBS to allow BCBS to acquire all shares in SGL Brakes GmbH ("**SGL Brakes**");
 - In the third step, BCBS will acquire all shares in SGL Brakes from SGL Carbon. SGL Brakes is active in the development of carbon-ceramic brake systems and in the production and sale of carbon-ceramic brake discs.
6. Following these transactions, Brembo and SGL will hold 50% of the shares in the JV respectively and jointly control the JV. Also, the JV will be full functional as it will perform on a lasting basis all the functions of an autonomous economic entity in the market. Therefore, the transaction represents a concentration within the meaning of Article 3(1)(b) of the Merger Regulation.

III. COMMUNITY DIMENSION

7. The combined aggregate worldwide turnover of the Parties is more than €2,500 million (SGL Carbon: € 1,612 million, Brembo: € 1,069 million in 2008); and the aggregate community-wide turnover of each of the Parties is more than €100 million (SGL Carbon: €[...] million, Brembo: €[...] million in 2008). There are three Member States in which the Parties achieve an aggregate combined turnover of more than €100 million ([...]) in each of these three Member States the turnover of SGL and Brembo exceeds €25 million respectively. In addition, none of the Parties achieves more than two-thirds of its aggregate community-wide turnover within one and the same Member State. Therefore, the transaction has a Community dimension pursuant to Article 1(3) ECMR.

IV. RELEVANT MARKETS

8. The JV will be active in the production and sale of carbon-ceramic discs for cars and light commercial vehicles. In addition, the transaction concerns the production and sale of callipers, a sector in which Brembo is active, and the manufacturing and sale of carbon fibres, a sector in which SGL is active.

A. Relevant product markets

Manufacturing of brake discs

9. A brake disc is a device for slowing or stopping the rotation of a wheel. Reduction of speed can be achieved with a number of technically different brake systems, including (i) drum brakes or (ii) disc brakes. In a brake disc, the disc is connected to the wheel and/or the axle. To stop the wheel, friction material in the form of brake pads (mounted on a device called a brake calliper) is forced against both sides of the disc. Friction causes the disc and attached wheel to slow or stop. Whereas cars normally use hydraulic systems, commercial vehicles typically use pneumatic force.
10. Hydraulic brake systems usually have the following main elements: the brake pedal, the brake boost, the master cylinder, the apportioning valves and the brakes themselves, including brake discs, brake pads and brake callipers, inter alia. In addition to these mechanical components, a number of electronic components, like ABS systems, can be added to the brake system.
11. The Parties consider that there are two main types of brake discs for cars²: (i) cast-iron brake discs and (ii) carbon-ceramic brake discs. The Parties submit further that cast-iron brake discs can be divided into: 1) non-high performance cast-iron brake discs and 2) high performance cast-iron brake discs. Regarding brake discs, the Parties' activities, via the JV, only overlap in the manufacturing of carbon-ceramic brake discs for cars.
12. Non-high performance cast-iron brake discs are usually made with solid cast iron, whilst high performance cast-iron brake discs have ventilation holes. These holes help the disc to dissipate the generated heat, giving a better braking performance than solid cast-iron discs. In addition, high performance cast-iron brake discs use nobler alloy cast iron, tighter machinery tolerances and different design: in contrast to non-high performance cast iron brake discs, high-performance brake discs include a cast iron ring and an alloy steel bell.
13. Carbon-ceramic brake discs are made with carbon fibre reinforced with ceramic composite material. The first development of carbon-ceramic brake discs was made in the railway industry for TGV applications. Nowadays, carbon-ceramic brake discs are used in various forms for railway, and aircraft braking applications. As regards automobiles, this type of brake discs is currently used in high performance cars, such as Ferrari, Mercedes, Audi or Bentley. In all cases, with the exception of Ferrari, OEMs offer their customers a choice between cast iron and carbon-ceramic brake discs, which indicates that both types of brake discs are considered as interchangeable from a customers' point of view, as both types of brake discs have similar breaking performance and OEMs use them for virtually the same high performance cars.
14. In terms of braking performance, the Parties submit that both products are comparable, even despite the fact that carbon-ceramic brake discs have less weight, low maintenance and higher heat tolerance comparable to cast-iron brake discs. From a supply side perspective, however, it is not feasible to switch production from cast-iron brake discs to

² Including light commercial vehicles

carbon-ceramic brake discs without incurring significant costs or risks, since the production processes and the equipment required are radically different.

15. With regard to prices, carbon-ceramic brake discs currently cost in the range of €[500-1000] Euros, while high performance cast-iron brake discs cost ca. €[100-200] Euros (non-high performance cast-iron brake discs cost ca. €[0-100]). However, carbon-ceramic brake disc lasts for the whole lifetime of the car, whereas a cast-iron brake disc has to be replaced 2-4 times on average during the lifetime of the car.
16. This divergence in price primarily derives from the fact that carbon-ceramic brake discs have higher production and raw materials' costs. The aim of the JV is to develop a mass production plant for the production of carbon-ceramic brake discs. To reduce these costs the Parties argue that by combining SGL's expertise in the field of carbon applications with Brembo's expertise in brake systems, the JV will be able to develop a new technology of carbon-ceramic brake discs. This development would allow the JV, inter alia, to produce discs in a continuous production process, to achieve better performance and to make lighter discs. It is intended that the JV will market the product cheaper in the long term and will be able to compete with high performance cast-iron brake discs in other car segments.
17. There are no previous Commission decisions concerning carbon-ceramic brakes. However, for brake systems for heavy commercial vehicles the Commission has considered in past decisions hydraulic braking systems³ for cars as being a separate product market.⁴ The Commission has also previously identified different markets for brakes' components, e.g. brake pads.⁵

No substitution between non-high performance cast-iron brake discs and carbon-ceramic brake discs

18. The results of the market investigation indicate no substitutability between non-high performance cast-iron brake discs and carbon-ceramic brake discs, since their performance is significantly different - therefore, they are used in different car segments (carbon-ceramic brake discs are used in the premium segment of high performance cars, whereas non-high performance cast-iron brake discs are mainly used in non-high performance cars).

Substitution between high performance cast-iron brake discs and carbon-ceramic brake disc

19. As regards the substitutability of high performance cast-iron discs and carbon-ceramic discs, the majority of the respondents confirmed that these products are interchangeable from the demand side perspective. OEMs offer their customers the choice between both types of brakes for the same cars/models. This indicates that carbon-ceramic brakes and

³ Including light commercial vehicles.

⁴ See case No. IV/M.768- Lucas/Varity, para. 10; case No. IV/M. 726- Bosch/Allied Signal, para. 9; case No. IV/M.149- Lucas/Eaton, paras. 25 seq.

⁵ See case No. IV/M. 726- Bosch/Allied Signal, para. 9 seq.

high performance cast-iron brakes have similar performance characteristics from a technical point of view, in particular that their braking efficiency is similar.

20. Also switching from using cast iron to carbon-ceramic does not involve significant changes in the OEMs assembly process. Both high performance cast-iron and carbon-ceramic brake discs can be fitted on the same high performance car models. It should also be noted that a number of OEMs of high performance cars do not offer carbon ceramic brakes on any of their models indicating that high performance brakes are capable of providing the necessary performance. Thus OEMs can and do choose to offer the same cars with either high performance cast iron brakes or with carbon ceramic brakes.
21. Similarly it is for the final customer to decide whether he wants his car to be equipped with high performance cast iron brakes or with carbon ceramic brakes⁶.
22. The differences in absolute prices between carbon-ceramic discs and high performance cast iron discs are alleviated by the fact that cast iron discs need to be replaced several times during the life time of a car whereas the substantially more expensive carbon-ceramic discs normally last for the lifetime of a car. Once the cost of the replacement discs and of the necessary labour to change them have been taken into account the absolute price difference is much less important. In any event, differences in absolute prices are not as such a decisive factor for determining a product market. It is rather the interaction of price levels that matters. In this respect, the majority of the OEM respondents which use both types of discs in this case indicated that the ability to increase prices for carbon ceramic discs is constrained by the fact that high performance cast iron discs constitute a suitable alternative for carbon ceramic discs.
23. It follows that high performance cast-iron brake discs and carbon-ceramic brake discs for cars and light commercial vehicles⁷ are considered as belonging to the same product market.

Manufacturing of callipers

24. Brembo produces callipers, which are one of the components of a brake system. The brake calliper is the assembly which houses the brake pads and pistons. There are two types of callipers: (i) high performance or floating callipers and (ii) non-high performance or fixed callipers. A fixed calliper does not move relative to the disc. It uses one or more pairs of opposing pistons to clamp from each side of the disc, and is more complex and expensive than a floating calliper. A floating calliper moves with respect to the disc, along a line parallel to the axis of rotation of the disc.
25. Fixed callipers have more than two pistons and are made from aluminium, whereas floating callipers have one or two pistons and are made from cast iron or cast iron/aluminium. Accordingly, the (melting and machining) equipment used for the production of high-performance/fixed callipers is different from the equipment of non-

⁶ With the exception of buyers of Ferraris, on which carbon-ceramic discs are fitted as standard.

⁷ At the moment, carbon-ceramic brake discs are used in high end, high performance cars. Greater use in light commercial vehicles is possible in the future, but this does not change the Commission's assessment of the case.

high performance/floating callipers. From a demand side, high performance callipers are mainly used along with high performance brake discs (cast-iron or carbon-ceramic), whilst non-high performance callipers are used with non-high performance cast-iron brake discs.

26. Along the same line, the Parties consider that there are two main categories of callipers: (i) high performance callipers and (ii) non-high performance callipers. The Parties consider further that a calliper for a carbon-ceramic brake disc is essentially the same as a calliper for a cast iron high performance disc. The two differences are: pads (friction material and geometry) and phenolic resin inserts into pistons of the calliper (used like a thermal barrier).
27. The market investigation showed a broad consensus for considering high performance callipers and non-high performance callipers not interchangeable. In fact, a overwhelming majority of the respondents pointed out that there are two different types of callipers: high performance and non-high performance. As some respondents stated, high performance callipers are used in high performance brake discs (i.e. high performance cast-iron brake discs and carbon-ceramic brake discs), whereas non-high performance callipers are used in non-high performance brake discs. Also, the market investigation clearly indicates that high and non-high performance callipers differ in size, performance, quality and price. None of the respondents indicated that carbon-ceramic brake discs need special callipers.
28. In the light of the above mentioned, the Commission considers that there is a limited degree of substitution between callipers for non-high performance discs and callipers for high performance discs. However, in this respect the relevant product market can be left open in the present case, since the operation will not result in competition concerns on any of the possible alternative markets.

Manufacturing of carbon fibres

29. SGL Carbon is a manufacturer of carbon-based products. It has a comprehensive product portfolio, including carbon fibres, which is a fundamental input for producing carbon-ceramic brake discs.
30. Carbon fibre is a material consisting of extremely thin fibres and composed mostly of carbon atoms. This kind of fibre is very strong for its size and can be moulded to form composite materials, such as ceramic composite material. Its main properties are: high tensile strength, low weight and low thermal expansion; and can be used in different applications, inter alia, aerospace and military applications, civil engineering, and motorsports.
31. The Parties consider that a separate market for carbon fibres should be defined. However, in this case the market definition can be left open in this respect as the transaction will not lead to competition concern under any potential market definition.

B. Relevant geographic markets

32. In previous decisions regarding brake systems for heavy commercial vehicles, the Commission considered the relevant markets to be at least EEA-wide.⁸ More recently, in a decision regarding other automotive components, the Commission indicated that there are arguments for a world-wide market definition in the automotive component business.⁹
33. The Parties consider the market for brake systems and callipers as worldwide and submit that transport costs for brake discs and callipers are low. The Parties estimate that transport costs per unit amount to about [5-10] % of the disc price, [0-5] % accounting for transport costs, and [0-5] % for duty.
34. The market investigation confirmed the Parties' view on the geographic market. An overwhelming majority of the respondents replied that transports costs are not significant, being below [5-10] % in the case of cast-iron brake discs and even lower (i.e. between [0-5] %) for high performance callipers and carbon-ceramic brake discs. Also, the respondents underlined that there are no specific trade barriers and that the products are traded globally. However, the relevant geographic market for high performance brake discs or for callipers can be left open in the present case, as the transaction will not lead to competition concerns under any market definition
35. As far as carbon fibres are concerned, the market investigation confirmed that transport costs do not exceed [5-10] % of the product price and there are no specific trade barriers for this product. Moreover, this product is transported and used worldwide in different markets and applications. However, the geographic market definition can be left open as the transaction will not lead to competition concerns under any potential market definition.

V. COMPETITIVE ASSESSMENT

High performance brake discs

36. With regard to the market for high performance brake discs for cars and light commercial vehicles, the Parties estimate their combined market share to be [20-30] % worldwide and [30-40] % at EEA level, with a negligible increase below [0-5] % in both cases, since SGL Carbon is not active in cast-iron brake discs. Moreover, strong competitors are present in the market, such as Fritz Winter ([5-10] % worldwide and [10-20] % EEA), Buderus ([5-10] % worldwide and [10-20] % EEA), SHW ([5-10] % worldwide and [10-20] % EEA), and OEMs manufacturers that produce their own high performance brake discs internally ([40-50] % worldwide and [30-40] % EEA).
37. If a narrower segment of carbon-ceramic brake discs for cars were to be considered, the Parties could be considered close competitors, as they are the two main suppliers of

⁸ See case No. IV/M.1342- Knorr-Bremse/Bosch, para. 23; case No. IV/M. 768- Lucas/Varity, para. 12; case No. IV/M.337- Knorr-Bremse/Allied Signal, para. 30; case No. IV/M.148- Lucas/Eaton, para. 35. Also see case IV/M. 1294- Daimler- Benz/Chrysler, para. 13; case IV/M. 741- Ford/Mazda, para. 13 seq.

⁹ See case COMP/M.4878- Continental/SiemensVDO, para. 50.

carbon-ceramic brake discs. A number of manufacturers are present on the market, but their production is insignificant. These undertakings are producers of carbon fibre reinforced silicon carbide ceramics that are already supplying to the market to a very limited extent, since they just started their production of carbon-ceramic brake discs.

38. The Parties argue that even on the potential segment for carbon-ceramic discs the transaction would not substantially change the market structure since only Brembo would be selling to the market whereas SGL Carbon would be selling only to [...]. In fact, [...] SGL Carbon's brake disc related patents and IP rights belong to [...]. If SGL Carbon intended to sell carbon-ceramic brake discs to third parties, it would have to pay a fee to [...]. The Parties conclude that in view of this SGL should not be considered as a market force. In addition, the Parties argue that car OEMs would have substantial buyer power and could impede any attempt to raise prices.
39. The Parties further argue that the potential segment of carbon-ceramic brake discs would be a developing segment with very limited size. Only [50.000 – 150.000] units were sold in the past years representing brakes for less than [10.000 – 40.000] cars per year.
40. The market investigation broadly confirmed that the number of carbon-ceramic brake discs that are sold per year is small. The market investigation further confirmed that the sale of carbon-ceramic discs is constrained by high performance cast iron discs, since both brake discs have similar braking performance from a customer and producer's point of view and , thus, end users could opt for high performance cast iron discs if prices of carbon-ceramic discs were to increase significantly.¹⁰ Therefore, carbon-ceramic brake discs are currently constrained by high performance cast-iron discs and are likely to continue to be constrained. In addition, the majority of the respondents to the market investigation expect prices for carbon-ceramic disc prices to decrease after the proposed transaction. Some respondents explained that they expect efficiency gains in the production of carbon ceramic discs and that the merging parties would try to increase market shares by passing on the efficiency gains to customers.
41. In addition, the market investigation confirmed that SGL Carbon is supplying only [...], whilst Brembo has a broader portfolio of customers among the OEMs. In view of this, the market shares of SGL do not seem indicative of its real market power.
42. Also, it was confirmed in the market investigation that car manufacturers have substantial buyer power which would make it difficult to successfully raise prices. In particular, the market investigation showed that OEMs (i) often have the right to unilaterally cancel an agreement, (ii) re-negotiate the contract, and (iii) multi-source in order to avoid relying on one supplier. Furthermore, OEMs have the possibility to switch to high performance cast-iron brake discs, since carbon-ceramic brake discs are optional in all cars except Ferrari which opted to use carbon-ceramic brakes on its models. Moreover, if after the transaction the JV were to increase prices, OEMs could not only refuse to purchase carbon-ceramic brake discs and switch to high performance cast-iron brake discs, but they could also threaten to cancel or reduce purchases of bulk brakes from Brembo.

¹⁰ With the exception of buyers of Ferraris, on which carbon-ceramic discs are fitted as standard. Ferrari, however, could potentially switch back to offering carbon-ceramic discs as an option.

43. In light of the above findings, it appears unlikely that the new entity could increase their prices: (i) the market for carbon-ceramic discs is very limited and highly constrained by high performance cast-iron discs (ii) OEMs have significant countervailing buyer power (iii) if the Parties were to increase prices, OEMs would switch to high performance cast-iron discs, (iv) difficulty in bringing about new generation of carbon-ceramic brake discs on a stand alone basis and, (v) SGL Carbon could be considered as a producer with limited power due to dependence on IP rights and patents [...].
44. It follows from the above that the proposed concentration would not lead to a significant impediment to effective competition under any alternative market definition, and thus the transaction does not raise serious doubts as to its compatibility with the common market.

Manufacturing of callipers

45. Brembo produces callipers for high performance brake discs; the transaction thus leads to a vertical relationship between those products.
46. The Parties submit that the market share of Brembo in the area of callipers is small and estimated to be about 5-10% in the EEA, and 0-5% worldwide. Strong competitors are present in calliper markets worldwide, such as Bosch ([10-20] %), Continental Teves ([10-20] %), TRW ([10-20] %), and Akebono (new entrant). All of these competitors produce both high performance and standard callipers. Many OEMs produce some callipers internally.
47. If a narrower market definition were to be taken into account, including the manufacturing of high performance callipers for high performance brake discs, Brembo's market share would be [20-30] % worldwide and [30-40] % at EEA level. The Parties submit that foreclosure is unlikely since there are strong competitors active in this market worldwide, inter alia: Continental Teves ([20-30] %), Advics ([20-30] %), TRW ([5-10] %), Akebono ([0-5] %), and Nissin ([0-5] %). In turn, on EEA level, the combined market share of TRW and Continental Teves would be [60-70] %.
48. The Parties claim that due to OEMs' significant countervailing buyer power, the JV would not be able to foreclose the market for high performance callipers. OEMs would continue to be in a position to force producers to sell complete disc brake systems to them, combining components of competing manufacturers.
49. According to the market investigation results, in general OEMs do not tend to source callipers and discs from the same supplier and prefer to try to multi-source in order not to rely on a single supplier. As a consequence, it would be unlikely that the merged entity will be able to bundle its products (i.e. selling callipers for high performance brake discs along with carbon-ceramic brake discs).
50. In light of the above, it appears unlikely that the new entity could foreclose the market due to the following factors: (i) moderate market share in the upstream market for callipers, (ii) presence of strong competitors in the callipers market, (iii) OEMs' significant countervailing buyer power, and (iv) OEMs tend to multi-source and not rely on one supplier.
51. Therefore, the proposed concentration will not lead to a significant impediment to effective competition under any alternative market definition concerning callipers and

thus the transaction does not raise serious doubts as to its compatibility with the common market

Manufacturing of carbon fibres

52. SGL is producing carbon fibres which are used for the production of carbon-ceramic brake discs. The transaction therefore leads to a vertical relationship in this regard.
53. As far as the upstream market for manufacturing carbon fibres is concerned, the Parties argue that SGL Carbon is not a significant player in the carbon fibre market and thus there is no risk of foreclosure. In fact, SGL Carbon market shares, both at EEA and worldwide level, would be between 5-10%. The Parties claim that the market for carbon fibre is highly competitive, with seven major manufacturers¹¹: Hexel ([20-30] % worldwide), Mitsubishi Rayon ([20-30] % worldwide), Toray ([10-20] % worldwide), Cytec ([10-20] % worldwide), SGL Carbon ([5-10] % worldwide), Toho-Tenax ([5-10] % worldwide), and Zoltek ([0-5] % worldwide). Toray, Hexel and Mitsubishi Rayon account for about [70-80] % of the global market.
54. The Parties submit that the present carbon-ceramic brake discs of Brembo have been certified by the Brembo customers. Therefore, if Brembo were to stop sourcing carbon fibres from [...] and switch to SGL Carbon, it would be likely to lose these certifications. To reinforce this argument, the Parties anticipate that Brembo will continue to source [...] carbon fibres for at least [...] years.
55. Moreover, even if Brembo were to stop sourcing carbon fibres from [...], this would not significantly harm [...] position in the market, since [...] sales to Brembo only accounts for about [0-5] % of its total sales of carbon fibres.
56. In view of the above, it can be concluded that the proposed concentration will not lead to a significant impediment to effective competition concerning carbon fibres and carbon-ceramic brake discs, and thus the transaction does not raise serious doubts as to its compatibility with the common market.

VI. CONCLUSION

57. For the above reasons, the Commission has decided not to oppose the notified operation and to declare it compatible with the common market and with the EEA Agreement. This decision is adopted in application of Article 6(1)(b) of the EC Merger Regulation.

For the Commission,

(signed)
Neelie KROES
Member of the Commission

¹¹ From 2007