

**CeramTec TopCo GmbH
Plochingen**

**Operating and Financial Review
for the period ended
30 June 2019**

As of 8 March 2018, the former owner Cinven closed the acquisition of CeramTec Group by a Consortium led by Funds advised by leading private equity firm BC Partners (“BC Partners”). The Public Sector Pension Investment Board (PSP Investments) and Ontario Teachers’ Pension Plan (Ontario Teachers’) are part of the consortium. The transaction was announced in October 2017. On 22 February 2018, anti-trust authorities approved the takeover. As a result, CeramTec AcquiCo GmbH (in the following “CeramTec AcquiCo”) acquired the shares in CeramTec Holding GmbH (in the following “CeramTec Holding”). CeramTec AcquiCo GmbH is a 100% subsidiary of CeramTec BondCo GmbH (in the following “CeramTec BondCo”), which is itself a 100% subsidiary of CeramTec TopCo. Based on the described acquisition CeramTec TopCo indirectly obtained control of the operating Advanced Ceramics Business as from the acquisition date 8 March 2018. CeramTec TopCo is the ultimate parent and prepares the interim condensed consolidated financial statements.

The purpose of this Operational and Financial Review is to show the development of the financial results of the operating advanced ceramics business for the six months period ended June 30, 2019 in comparison to the six months period ended June 30, 2018. The financial data as of and for the six months period ended June 30, 2019 have been derived from the interim condensed consolidated financial statements. The financial data for the six months period ended June 30, 2018 were prepared as a pro forma aggregation of two analysis periods for the two different ultimate parents, to enable a consistent view of the operating entities in the consolidated group: for the period 1 January 2018 to 28 February 2018 for the consolidated group of the former ultimate parent CeramTec Holding GmbH; for the period 1 March 2018 to 30 June 2018 for consolidated group of the current ultimate parent CeramTec TopCo. From a legal point of view the group consisted of the holding companies CeramTec TopCo, CeramTec BondCo and CeramTec AcquiCo without running an operating business in the period 1 January 2018 until acquisition date. Accordingly, prior-year figures in the interim condensed consolidated financial statements reflect operating business only for the period beginning with acquisition date.

The following discussion should be read in conjunction with the information contained in our interim condensed consolidated financial statements for the six months period ended June 30, 2019 including the notes thereto. In the following, we discuss certain financial quantities on an adjusted basis, before giving effect to depreciation and amortization and certain extraordinary, non-recurring items.

The figures in this review are presented in Euro. The amounts are in millions of Euros (EUR m). All amounts are rounded using standard commercial principles. In some cases, adding single values to the total values may therefore lead to differences. Due to rounding differences, figures in tables and cross-references may differ slightly from the actual figures (units of currency, percentages, etc.).

Business Overview

We are a leading global developer, manufacturer and supplier of high performance ceramics (“HPC”) solutions for various end markets including medical, automotive, industrial, consumer and electronics. Our HPC solutions are made of advanced ceramics, which are highly specialized materials with superior biological, chemical, mechanical, thermal, electric, magnetic or optical properties compared to competing products made from metal or polymers (plastics). We have been engaged in the HPC industry for over 100 years, with operational expertise and experience in creating innovative system solutions for longstanding customers at an industrial scale. We currently offer a wide range of HPC solutions including hip joint prostheses components, actuators in engine valves for fuel injection systems, high speed cutting tools and transparent ceramic components for armor applications. The versatility of HPC products and resulting wide- range of applications provides us with a highly diversified end market and customer base.

Our operations can be divided into two businesses, Medical Products and Industrial.

Medical Products

Our Medical Products business focuses on developing and manufacturing ceramic components for hip joint prostheses, such as ball heads and cup inserts used in total hip replacement (“THR”) procedures. In the six months period ended June 30, 2019, it generated 41.8% of our revenue.

Ceramic materials are replacing traditional materials for hip joint prosthetic components such as metal which can trigger negative patient reactions, for example due to allergic reactions resulting from metal sensitivity. Our HPC medical solutions are biologically inert and have high wear resistance and excellent friction behaviour, making them one of the few materials that are durable and stable enough to withstand the corrosive effects of bodily fluids. More than 18 million of our BIOLOX® ceramic components have been implanted in patients globally to date. We estimate that nearly one in two hip joint implant systems sold worldwide includes at least one ceramic component and we estimate our BIOLOX® products represented more than 95% of the ceramic components used for these hip joint implant systems. We believe that our BIOLOX® brand has come to symbolize high quality and innovation and is increasingly preferred by surgeons and other medical professionals. We anticipate that our HPC solutions will be used for various other joint replacements, such as knee and shoulder implants in the future.

Industrial

Our Industrial business develops, manufactures and supplies a broad range of highly specialized, performance critical HPC solutions for customers spanning a wide range of industries including automotive, defense, electronics, industrial machinery and medical equipment. In the six months period ended June 30, 2019, 58.2% of our revenue was generated by our Industrial business.

Our dedicated teams of scientists and engineers collaborate closely with customers to develop tailor made solutions and production processes to fulfill distinct functionality and performance requirements. We believe that we are one of the few advanced ceramics manufacturers with a full range of HPC materials and manufacturing processes with a global reach. Our HPC solutions are often used in performance-critical components. For example, our cutting tools have a longer life and faster cutting speeds compared to non-HPC cutting tools, allowing our customers to save costs and reduce downtime. In automotive engineering, HPC products, including our piezo ceramic components, play a vital role in increasing safety, improving cost-effectiveness and enhancing comfort in vehicles. Our ceramic substrates are used for a variety of purposes in the electronics and telecommunications sector, including measurement and control technology and entertainment electronics. We believe that the specialized, mission critical nature of our solutions, our long standing customer relationships and our highly diversified portfolio of solutions and customer base, reduces the exposure of our Industrial business to any single industry or product.

Results of Operations

The following table sets forth amounts from our income statement along with the percentage change for the six months period ended June 30, 2019 compared to the six months period ended June 30, 2018,

	Six months Ended June 30,		
	2019	2018	Change
	<i>(in EUR m)</i>		<i>(%)</i>
Revenue	326.2	309.6	5.4
Cost of sales	183.0	191.1	-4.3
Gross profit	143.2	118.5	20.9
Selling costs	49.2	46.9	4.9
Research and development costs	11.7	11.4	2.3
General administrative costs	14.4	13.9	4.1
Other income and expenses (-), net	-1.3	-11.3	-88.1
Operating income	66.5	35.0	90.0
Interest income and other finance income	6.8	13.5	-49.8
Interest expenses and other finance costs	51.0	56.6	-9.9
Financial result	-44.2	-43.1	2.6
Profit/(Loss) before income tax	22.3	-8.1	N/A
Income tax expense	-13.0	-7.2	79.6
Net profit/(loss) for the period	9.3	-15.4	N/A

Our management considers the results of operations on the adjusted basis, before giving effect to depreciation and amortization as well as certain extraordinary, non-recurring items, with Management adjusted EBITDA as an important indicator of business performance. Management adjusted EBITDA, its main components and its reconciliation to Operating Income as reported are shown in the following table,

	Six months Ended June 30,		
	2019	2018	Change
	<i>(in EUR m)</i>		<i>(%)</i>
Revenue	326.2	309.6	5.4
Cost of sales*	152.0	143.6	5.9
Gross profit*	174.2	166.0	4.9
Selling costs*	23.3	25.5	-8.7
Research and development costs*	10.4	10.5	-1.0
General administrative costs*	9.6	9.6	-0.0
Other income and expenses (-), net*	-0,1	-0.1	N/A
Management Adjusted EBITDA	130.8	120.4	8.7
- Exceptional Items	10.6	23.0	-53.7
EBITDA	120.2	97.4	23.4
- Amortization, Depreciation and impairment charges on non-current assets	-53.7	62.4	-14.4
Operating income	66.5	35.0	90.0

* Excluding depreciation, amortization and exceptional items

The following table provides a breakdown of the Exceptional Items for the six months ended June 30, 2019, compared to the six months ended June 30, 2018.

	Six months Ended June 30,	
	2019	2018
	<i>(in EUR m)</i>	
Exceptional items	10.6	23.0
Restructuring costs	5.6	1.5
Other non-recurring costs	4.3	2.7
Foreign exchange conversion effects	0.3	0.0
Acquisition costs	0.4	18.8

Restructuring costs in 2019 mainly comprise severance payments for the reduction of staff at CeramTec GmbH and for restructuring initiatives undertaken in our Industrial business. Restructuring costs in 2018 mainly comprise severance payments for the reduction of staff at CeramTec GmbH and for management changes at CeramTec Service GmbH.

Other non-recurring costs in 2019 mainly comprise of consulting and litigation expenses while 2018 mainly comprise of a one-time bonus for tariff employees, consulting and litigation expenses and additional contribution to pension fund.

Foreign exchange conversion effects reflect certain impacts related to currency conversions that are accounted for in our Operating income.

Acquisition costs in 2019 and 2018 comprise costs related to the acquisition of CeramTec by BC Partners.

Revenue

The following table provides a breakdown of our revenue for the six months ended June 30, 2019, compared to the six months ended June 30, 2018, by business:

	Six months Ended June 30,		
	2019	2018	Change
	<i>(in EUR m)</i>		<i>(%)</i>
Medical Products	136.4	116.4	17.2
Industrial	189.8	193.3	-1.8
Total revenue	326.2	309.6	5.4

Total revenue for the six months ended June 30, 2019 was €326.2 million, an increase of €16.6 million or 5.4%, as compared to €309.6 million for the six months ended June 30, 2018.

Revenue in our Medical Products business was €136.4 million for the six months ended June 30, 2019, an increase of €20.0 million or 17.2%, as compared to €116.4 million for the six months ended June 30, 2018. This increase was mainly due to growth in the number of components sold.

Revenue in our Industrial business was €189.8 million for the six months ended June 30, 2019, a decrease of €-3.5 million or -1.8%, as compared to €193.3 million for the six months ended June 30, 2018. This decrease was mainly due to softer demand in automotive and construction markets, partly offset by strong textile and catalyst carrier demand with almost stable substrate business. As per March 1, 2019, we have changed the commercial set-up of our Industrial business, with sales teams in Europe now being organized along end industry verticals: Mobility, Electronics and Industrial applications.

The following table provides a breakdown of our revenue for the six months ended June 30, 2019, compared to the six months ended June 30, 2018, by region.

	Six months Ended June 30		
	2019	2018	Change
	<i>(in EUR m)</i>		<i>(%)</i>
Europe (excluding Germany)	144.9	133.6	8.5
Germany.....	74.4	80.0	-7.0
North America	47.3	41.4	14.3
Asia	51.5	44.8	15.0
Other regions.....	8.1	9.8	-17.4
Total net sales	326.2	309.6	5.4

Cost of Sales and Gross Profit

The following table provides a breakdown of our cost of sales for the six months ended June 30, 2019, compared to the six months ended June 30, 2018,

	Six months Ended June 30			
	2019		2018	
	<i>(in EUR m)</i>	<i>(% of net sales)</i>	<i>(in EUR m)</i>	<i>(% of net sales)</i>
Material and packing costs	62.5	19.2	58.7	19.0
Personnel expenses	67.6	20.7	63.1	20.4
Amortization and depreciation	27.8	8.5	40.0	12.9
Other cost of sales	25.0	7.7	29.3	9.5
Cost of sales	183.0	56.1	191.1	61.7

Cost of sales was €183.0 million (56.1% of revenue) for the six months ended June 30, 2019, an decrease of €8.1 million or -4.3%, compared to €191.1 million (61.7% of revenue) for the six months ended June 30, 2018. Excluding amortization and depreciation and non-recurring items, our adjusted cost of sales increased by 5.9% from €143.6 million or 46.4% of revenue for the six months ended June 30, 2018 to €152.0 million or 46.6% of revenue for the six months ended June 30, 2019.

Gross profit was €143.2 million for the six months ended June 30, 2019, an increase of €24.7 million or 20.9%, as compared to €118.5 million for the six months ended June 30, 2018.

Adjusted gross profit margin, before giving effect to depreciation and amortization, was 53.4% for the six months ended June 30, 2019 compared to 53.6% for the six months ended June 30, 2018, mainly coming from a softer product mix within the Industrial business.

Selling Cost

Selling costs were €49.2 million (15.1% of revenue) for the six months ended June 30, 2019, an increase of €2.3 million or 4.9%, as compared to €46.9 million (15.2% of revenue) for the six months ended June 30, 2018. Excluding amortization and depreciation and non-recurring items, our adjusted selling costs decreased by €2.2 million to €23.3 million or 7.1% of revenue for the six months ended June 30, 2019, compared to €25.5 million or 8.2% of revenue for the six months ended June 30, 2018.

Research and Development Cost

Research and development costs were €11.7 million (3.6% of revenue) for the six months ended June 30, 2019, an increase of €0.3 million or 2.3%, as compared to €11.4 million (3.7% of revenue) for the six months ended June 30, 2018. Excluding amortization and depreciation and non-recurring items, our adjusted research and development costs decreased to €10.4 million or 3.2% of revenue for the six months ended June 30, 2019 from €10.5 million or 3.4% of revenue for the six months ended June 30, 2018.

General Administrative Cost

General administrative costs were €14.4 million (4.4% of revenue) for the six months ended June 30, 2019, an increase of €0.6 million or 4.1%, as compared to €13.9 million (4.5% of revenue) for the six months ended June 30, 2018. Excluding amortization and depreciation and non-recurring items, our adjusted general administrative costs remain unchanged at €9.6 million or 2.9% of revenue for the six months ended June 30, 2019 compared to 3.1% of revenue for the six months ended June 30, 2018.

Other Income and Expenses

Other expenses were €1.3 million for the six months ended June 30, 2019, a decrease of €9.9 million compared to other expenses of €11.3 million for the six months ended June 30, 2018. This decrease was mainly due to not repeating acquisition costs for the acquisition of CeramTec by BC Partners in 2018. Excluding non-recurring items, our adjusted other expenses, net, were €0.1 million for the six months ended June 30, 2019 merely constant with adjusted other expenses, net of €0.1 million for the six months ended June 30, 2018.

Interest Income and Other Financial Income

Interest income and other finance income was €6.8 million for the six months ended June 30, 2019, a decrease of €6.7 million as compared to €13.5 million for the six months ended June 30, 2018. This decrease was mainly due to a lower impact resulting from the fair value measurement of derivatives and foreign currency effects compared to the six months ended June 30, 2018

Interest Expenses and Other Finance Costs

Interest expenses and other finance costs were €51.0 million for the six months ended June 30, 2019, a decrease of €5.6 million as compared to €56.6 million for the six months ended June 30, 2018. This decrease was mainly due to lower losses resulting from the fair value measurement of derivatives. The financial expenses of €25.7 million include €13.9 million of interest expenses from syndicated loan, revolving credit line and bond, €9.6 million of interest expenses from a shareholder loan, €1.2 million of expenses from the effective interest rate method and €1.0 million of other interest expenses.

Income Tax Expenses

Income tax expenses were €13.0 million for the six months ended June 30, 2019, an increase of €5.8 million as compared to €7.2 million expenses for the six months ended June 30, 2018. This increase was mainly due to higher deferred tax expenses resulting from the valuation of derivatives and lower deferred tax income from the recognition of deferred tax assets on tax loss carry forwards compared to Q2.2018.

Net Profit / Loss

As a result of the developments described above, net profit for the period was €9.3 million for the six months ended June 30, 2019, compared to a net loss of €15.4 million for the six months ended June 30, 2018.

Financial Condition, Liquidity and Capital Resources

As of June 30, 2019, the gross financial debt, the cash balance as well as the undrawn Revolving Credit Facility were as follows:

	As of June 30, 2019 <i>(in EUR m)</i>
Gross financial debt (without accrued transaction costs)	1,456.8
<i>thereof bond</i>	401.0
<i>thereof term loans</i>	1,045.3
<i>thereof revolving credit facility</i>	0.0
<i>thereof accrued interest</i>	10.5
Cash	31.5
Net debt	1,425.3
Undrawn Revolving Credit Facility.....	75.0

The management adjusted EBITDA for the last twelve months ended June 30, 2019 was €236.7 million leading to the net debt leverage ratio of 6.0x, compared to the management adjusted EBITDA for the last twelve months ended June 30, 2018 of €220.1 million and the net debt leverage ratio of 6.8x, respectively. The business has continually reduced the net debt leverage ratio over the past quarters.

The company currently holds €5 million nominal value of own bonds, which were purchased in the fourth quarter of 2018. First half of 2019 is affected by a voluntary repayment of the term loan in Q2 in the amount of €28 million to the Facility B1 and USD 6 million to the Facility B2.

Cash Flow Statement

The following table shows the cash flow statement for the six months period ended June 30, 2019 and 2018.

	Six months ended June 30, 2019	Six months ended June 30, 2018
	<i>(in € million)</i>	<i>(in € million)</i>
Net profit / (loss) for the period	9.3	-15.4
Income tax expenses / benefit(-)	13.0	7.2
Interest result	49.4	50.3
Amortization, depreciation and impairment changes of non-current assets.....	53.7	62.4
Gain (-) / Loss on disposal of fixed assets.....	0.0	0.1
Increase / decrease (-) in provisions (excluding deferred taxes)	-3.4	-3.9
Income tax refund / (payment)	-9.8	-9.6
Other non-cash expenses / income (-), net.....	-7.5	-6.7
Increase (-) / decrease in inventories	-1.6	1.2
Increase (-) / decrease in trade receivables	-12.6	-10.2
Increase (-) / decrease in other receivables and (financial) assets.....	-0.3	31.5
Increase / decrease (-) in trade payables.....	-6.6	-49.1
Increase / decrease (-) in other (financial) liabilities.....	11.1	13.3
Cash flow from operating activities	94.7	71.3
Cash received from disposals of property, plant and equipment	0.1	1.1
Cash paid (-) for investments in property, plant and equipment.....	-20.8	-12.5
Cash received from grants	0.0	0.0
Cash paid (-) for investments in intangible assets.....	-0.5	-0.3
Cash paid (-) for the acquisition of entities	0.0	-2,490.9
Cash flow from investing activities	-21.2	-2,502.6
Cash received from contribution to capital reserve	0.0	500.4
Cash received from issuance of bond.....	0.0	393.5
Cash received from / repayment (-) of syndicated loan	-33.4	1,075.8
Interest paid (-).....	-28.3	-28.5
Cash received from drawing / repayment (-) of revolver loan	0.0	0.0
Cash received from / repayment (-) of shareholder loan.....	0.0	523.8
Cash paid for capitalized leases (right-of-use assets)	-1.4	0.0
Cash flow from financing activities.....	-63.0	2,465.0
Change in cash and cash equivalents.....	10.4	33.7
Net foreign exchange difference	0.1	0.0
Cash and cash equivalents at the beginning of the period.....	21.1	14.8
Cash and cash equivalents at the end of the period.....	31.5	48.4

Cash flows from operating activities increased from €71.3 million for the six months ended June 30, 2018 to €94.7 million for the six months ended June 30, 2019. The increase is driven by a higher overall profit, solid operative working capital management and less outflow for A/P thanks to not repeating payments for transaction partly offset by decreased other receivables and financial assets.

Cash flows used in investing activities for property, plant and equipment and intangible assets increased from €12.8 million for the six months ended June 30, 2018 to €21.3 million for the six months ended June 30, 2019. The higher investment spending in the six months ended June 30, 2019 was mainly driven by phasing of growth projects reflecting the market conditions especially on the medical side. Investing activities in the period ending 30th of June 2018 include cash paid in connection with the acquisition by BC Partners of €2,491 million comprising of €1,603 million purchase price to the seller, €877 million repayment of debt and €11.0 million the first-time recognition of the drafted PPA.

Cash flows used in financing activities decreased from an inflow of €2,465.0 million for the six months ended June 30, 2018 to an outflow of €63.0 million for the six months ended June 30, 2019. This is mainly due to new financing structure comprising inflows from loans, bond and contribution to capital reserve in 2018 while 2019 is affected by a voluntary repayment of the term loan in Q2 in the amount of €28 million to the Facility B1 and USD 6 million to the Facility B2.

Capital Expenditures

The following table provides an overview of our capital expenditures (w/o right-of-use assets) for the six months ended June 30, 2019 and 2018:

	Six months ended June 30, 2019	Six months ended June 30, 2018
Additions to intangible assets.....	0.5	0.3
Additions to property, plant and equipment.....	19.7	10.1
Capital expenditures (gross)	20.2	10.4
Government grants	0.0	0.0
Capital expenditures (net).....	20.2	10.4
Additions from business acquisitions.....	0.0	0.0

In general, our capital investment is split evenly between maintenance and growth projects. Cash outflow for the six months ended June 30, 2019 for intangible assets amounts to €0.5 million and for tangible assets amounts to €20.8 million.

Employees

As of June 30, 2019, the CeramTec Group employed a workforce of 3,615 people, an increase of 2.2% compared to the previous year.

Headcount	June 30, 2019	June 30, 2018
Employees by region		
Europe (w/o Germany)	652	664
Germany	2.138	2.040
North and South America	346	336
Asia	479	498
	3.615	3.538
Employees by function		
Manufacturing	2.836	2.785
Sales	309	318
Research and development	208	184
Administration	261	251
	3.615	3.538

Recent Developments

There have been no recent developments.

Plochingen, 12 August 2019

CeramTec TopCo GmbH

The management

Dr. Hadi Saleh