

Performance Materials

PERFORMANCE MATERIALS

Key figures

€ million	2018	2017	Change	
			€ million	in %
Net sales	2,406	2,446	-40	-1.7%
Operating result (EBIT) ¹	508	689	-181	-26.3%
Margin (% of net sales) ¹	21.1%	28.2%		
EBITDA ¹	769	947	-178	-18.8%
Margin (% of net sales) ¹	32.0%	38.7%		
EBITDA pre ¹	786	980	-194	-19.8%
Margin (% of net sales) ¹	32.7%	40.1%		
Business free cash flow ¹	588	906	-318	-35.1%

¹ Not defined by International Financial Reporting Standards (IFRSs).

DEVELOPMENT OF NET SALES AND RESULTS OF OPERATIONS

In 2018, net sales of the Performance Materials business sector decreased by -1.7% to € 2,406 million (2017: € 2,446 million). This drop was mainly attributable to adverse exchange rate effects of -3.4% or € 83 million. They resulted primarily from a weaker U.S. dollar over the previous year and declining Asian currencies such as the Taiwan dollar and the Japanese yen.

The Semiconductor Solutions business unit, which pools the business for materials to produce integrated circuits, generated strong organic sales growth in 2018, as expected.

Sales in the Surface Solutions business unit fell short of expectations and were below the prior year's figure due to factors including the decline in demand for automobiles in Europe, North America and China.

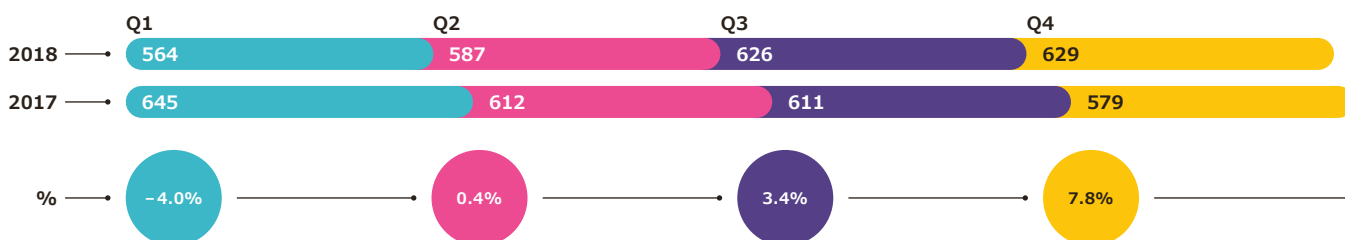
The Display Solutions business unit recorded organic sales that were just positive owing to rising demand and strong growth in the OLED area and to non-recurring project-related liquid crystal sales, above all in the third and fourth quarters of 2018.

The net sales in the individual quarters as well as the respective organic growth rates in 2018 are presented in the following graph:

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Net sales and organic growth¹ by quarters²

€ million/organic growth in %



¹ Not defined by International Financial Reporting Standards (IFRSs).

² Quarterly breakdown unaudited.

Net sales of the Performance Materials business sector by region developed as follows:

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Net sales by region

€ million	2018	Share	Organic growth ¹	Exchange rate effects	Acquisitions/divestments	Total change	2017	Share
Europe	220	9%	-4.8%	-0.3%	-	-5.0%	231	9%
North America	214	9%	0.3%	-4.6%	-	-4.3%	223	9%
Asia-Pacific (APAC)	1,932	80%	2.9%	-3.5%	-	-0.7%	1,945	80%
Latin America	32	2%	-3.8%	-8.3%	-	-12.1%	37	2%
Middle East and Africa (MEA)	8	0%	-18.4%	-1.6%	-	-20.0%	10	0%
Performance Materials	2,406	100%	1.7%	-3.4%	-	-1.7%	2,446	100%

¹ Not defined by International Financial Reporting Standards (IFRSs).

The development of results of operations is set out below:

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Results of operations

€ million	2018		2017		Change	
	€ million	in %	€ million	in %	€ million	in %
Net sales	2,406	100.0%	2,446	100.0%	-40	-1.7%
Cost of sales	-1,231	-51.2%	-1,145	-46.8%	-86	7.5%
Gross profit	1,175	48.8%	1,301	53.2%	-127	-9.7%
Marketing and selling expenses	-255	-10.6%	-242	-9.9%	-13	5.2%
Administration expenses	-90	-3.7%	-72	-2.9%	-18	25.1%
Research and development costs	-242	-10.1%	-225	-9.2%	-17	7.5%
Remaining operating expenses and income	-81	-3.3%	-73	-3.0%	-7	9.8%
Operating result (EBIT)¹	508	21.1%	689	28.2%	-181	-26.3%
Depreciation/amortization/impairment losses/ reversals of impairment losses	261	10.9%	258	10.5%	3	1.3%
<i>(of which: adjustments)</i>	<i>(21)</i>		<i>(26)</i>		<i>(-5)</i>	<i>(-19.1%)</i>
EBITDA¹	769	32.0%	947	38.7%	-178	-18.8%
Restructuring expenses	1		5		-4	-78.5%
Integration expenses/IT expenses	15		20		-6	-27.1%
Gains (-)/losses (+) on the divestment of businesses	-		1		-1	-
Acquisition-related adjustments	-		-		-	-
Other adjustments	1		7		-6	-89.5%
EBITDA pre¹	786	32.7%	980	40.1%	-194	-19.8%

¹ Not defined by International Financial Reporting Standards (IFRSs).

In 2018, gross profit was € 127 million below the previous year's level and amounted to € 1,175 million (2017: € 1,301 million), resulting in an expected reduction in the gross margin to 48.8%

(2017: 53.2%). The development of the gross margin is essentially explained by the price declines observed in the display industry and by falling sales in the Surface Solutions business unit.

The operating result (EBIT) decreased to € 508 million in 2018 (2017: € 689 million). In addition to the sales and margin-related decline in gross profit, this was due to higher marketing and selling expenses as well as additional research and development costs. While the rise in marketing and selling expenses was primarily attributable to logistics costs, the increase in research costs was chiefly due to the tapping of new growth areas in materials for the production of integrated circuits.

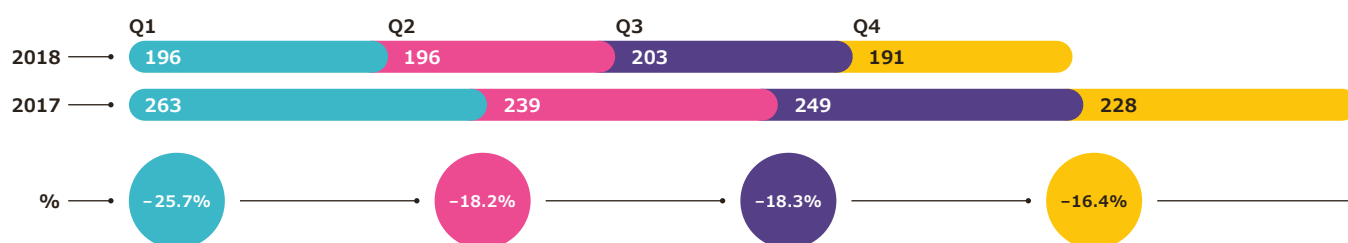
EBITDA pre of the business sector declined by –19.8% to € 786 million (2017: € 980 million). The negative foreign exchange impact of –6.9% lowered this key performance indicator. Consequently, at 32.7%, the EBITDA pre margin was below the prior-year figure (2017: 40.1%).

The development of EBITDA pre in the individual quarters in comparison with 2017 is presented in the following overview:

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EBITDA pre¹ and change by quarter²

€ million/change in %



¹ Not defined by International Financial Reporting Standards (IFRSs).

² Quarterly breakdown unaudited.

DEVELOPMENT OF BUSINESS FREE CASH FLOW

At € 588 million, the business free cash flow of the Performance Materials business sector in 2018 fell short of the prior-year figure (2017: € 906 million). This resulted from the reduction in EBITDA

pre, a rise in receivables as of the 2018 balance sheet date that was primarily due to one-time project-related sales of liquid crystals in the fourth quarter of 2018, and higher inventories in the Surface Solutions business unit.

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Business free cash flow¹

€ million	2018	2017	Change	
			€ million	in %
EBITDA pre ¹	786	980	-194	-19.8%
Investments in property, plant and equipment, software as well as advance payments for intangible assets	-118	-125	7	-5.6%
Changes in inventories	-44	-14	-30	>100.0%
Changes in trade accounts receivable and receivables from royalties and licenses	-36	65	-101	>100.0%
Business free cash flow¹	588	906	-318	-35.1%

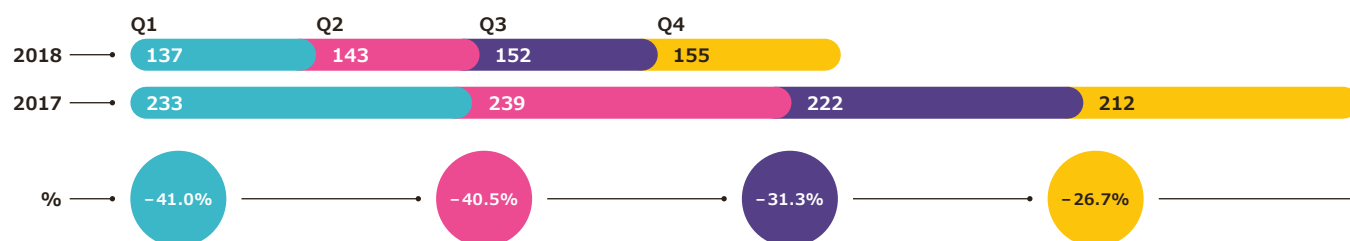
¹ Not defined by International Financial Reporting Standards (IFRSs).

The development of business free cash flow items in the individual quarters in comparison with 2017 is presented in the following overview:

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Business free cash flow¹ and change by quarter²

€ million/change in %



¹ Not defined by International Financial Reporting Standards (IFRSs).

² Quarterly breakdown unaudited.