

Germany's BASF regained the top spot in the ICIS Top 100 Chemical Companies ranking of the world's leading producers based on 2019 sales. China's Sinopec came in second, followed by US-based Dow. Sales for the Top 100 fell 4.9% on a global manufacturing slowdown and overcapacity in key commodity chemicals markets. In the listing we exclude industrial gases, fertilizers and, where possible, non-chemical portions of companies.

### INTRODUCTION AND ANALYSIS

27 The latest ICIS Top 100 listing and analysis of chemical company financial performance looks at how companies fared in an increasingly difficult 2019. Commodity chemicals took the brunt of the downturn on oil and overcapacity.

### **TOP 100 RANKING**

**31** The global listing of the leading producers of chemicals ranked by sales in 2019

### TOP 100 CHEMICAL COMPANI

# Top 100 sales hit pre-coronavirus

Companies reported sales and profit declines in 2019 even before the coronavirus crisis. Commodity chemicals took the brunt of the downturn on oil and overcapacity

#### Nigel Davis London

The latest ICIS Top 100 listing and analysis of chemical company financial performance looks at how companies fared in an increasingly difficult 2019.

Before the coronavirus took hold and started to spread, the data show companies under pressure in a weak global economic environment. As chemicals demand grew less strongly, or stagnated, sales volumes were under pressure. Margins were depressed later in the year, particularly as lower oil prices and overcapacity in some markets fed through into a weaker price environment.

The Top 100 listing encompasses the entire chemicals sector, from commodity petrochemicals to much more specialised chemical products and materials. As such, it gives a wide ranging view of performance across the sector.

It focuses on the leading companies, the biggest in terms of sales in calendar 2019 - or the most recent financial year. ICIS strives to report on the chemicals businesses of the major players only, but that is not always possible. The footnotes to the ICIS Top 100 table explain the differences. Not all players release data on their chemical operations specifically.

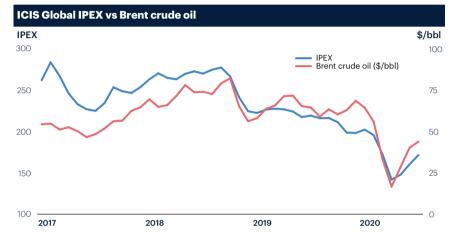
### **BASF** regains top spot

In 2019, BASF regained its top position in the ICIS Top 100 listing, reporting the greatest sales value - converted in our table into US dollars using a 31 December 2019 exchange rate.

The exchange rates used for all players are for 31 December 2019, irrespective of financial vear end.

Noteworthy in the table data is the top line pressure faced by most producers year on year. The quarterly picture for many, particularly for those operating in upstream petrochemicals, began to reflect a capacity and economy driven cyclical downturn which, later in 2019, was expected by some to continue until the second quarter of 2020.

That outlook was changed entirely, of course, by the coronavirus pandemic and, early in 2020, by the oil price crash which put



immense downward pressure on petrochemicals prices.

ICIS continues to chart the impact of coronavirus lockdowns on regional and global markets for a wide range of products. We have discussed the radically shifting drivers of the chemicals business in a series of free webinars through 2020, the recordings of which are available on icis.com.

Our price and news reporting, and our analysis, including scenarios for end-use sector demand continues to illustrate the impact of the coronavirus on markets across the industry (see links at end).

Industry data show that global chemicals shipments valued in US dollars were down 4% in 2019. Shipments are equivalent to turnover, or value of output. The global figure masks distinct regional differences. North America shipments were up 2% but Asia Pacific shipments (by far the largest in absolute terms) down 6% due in large part to the growth slowdown in China. Chemicals shipments in Europe were down 7%, according to the data collated by the American Chemistry Council (ACC).

### Sales under pressure

For most companies included in the ICIS Top 100 listing, 2019 was a difficult year with performance under pressure.

Sales values declined for many year on year, as the Top 100 table and graphics show with some major price and volume driven sales falls for the more commodityoriented players.

In general, the more specialised and consumer-oriented chemical producers, including the major coatings players, were among the group of companies producing top line growth for the year.

The Top 100 companies generated revenues of more than \$1tr in 2019 down 4.9% on 2018 on a comparable, as reported, basis.

The accumulated data show that 34 of the companies in this listing reported a fall in sales of more than 10%.

These are largely commodity chemicals companies exposed to volatile markets which were hit hard in 2019 by the declining industrial economic environment and sometimes overcapacity-driven price falls.

In contrast, some producers of more specialised chemicals, such as flavours and fragrances and, as mentioned earlier, some coatings producers, generated stronger sales revenues. Their end-use markets proved to be much more stable and actually, robust.

Data are collected for the Top 100 companies from annual reports and other official sources with comparisons made in local cur-

### SPECIAL REPORT TOP 100 CHEMICAL COMPANIES



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rencies. Absolute values for sales, profits, etc are shown in the table in US dollars.

### **Profitability challenged**

Clearly, margins were under pressure in 2019. As the industry generally turned down, sales volumes were hard won and prices came under increasing crude oil and demand driven downward pressure.

Upstream petrochemicals and materials producers particularly find it difficult to hold on to prices and margin in a downward moving market much more so than when the industrial market environment is looking up.

Following a number of years of strong returns, profits in the industry fell in 2019.

Operating profit (EBIT – 'clean' earnings before interest and tax) for the Top 100 group of companies fell 17.4% on average, clearly illustrating how exposed the sector generally was to the downturn pre-coronavirus.

Across such a diverse group of companies it is not surprising if net profits follow a somewhat different path given the degree of corporate restructuring undertaken in the sector at any one time – and the change in the make-up of company portfolios.

But bottom line breakeven was breached by a number of chemicals producers in 2019. A net loss was reported by 10 of the Top 100 group of companies. On average, net income was down 46.1%.

In the face of the downward pressure on volumes, prices and margins it was not surprising that chemicals companies began to cut back in 2019.

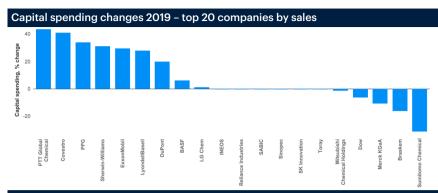
#### **Efficiency measures**

Efficiency measures have become increasingly important for sector players against the backdrop of the low oil price environment particularly, but lately also against the sharp deterioration in demand brough about by national lockdowns in the midst of the coronavirus pandemic.

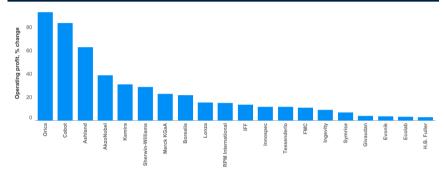
In pre-pandemic times the upstream players in the industry were already reacting to the pressure on top line growth on cash flows. The ICIS Top 100 data show the way in which US companies tend to react quickly to events and, possibly, cut back harder and faster than corporations in other parts of the world.

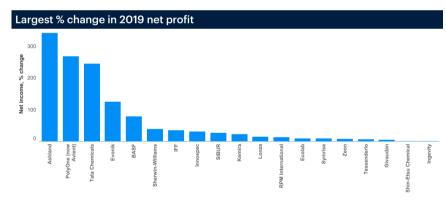
Industry players have been investing capital back into production assets. The US shale boom is an example of an opportunity that many players did not feel they could resist. The investment in shale as related assets in the US continued apace in 2019 as major new production facilities, including steam crackers and polyethylene (PE) plants, started to come on stream.

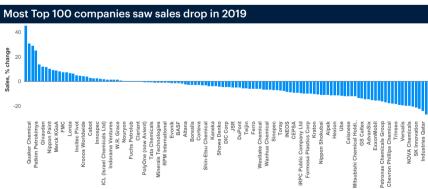
The wave in shale-related capital expenditure may be abating but the impact of this trend is not necessarily apparent across the







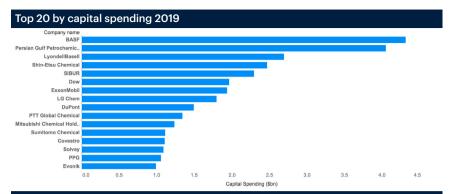




companies involved and ranked in the ICIS Top 100 table.

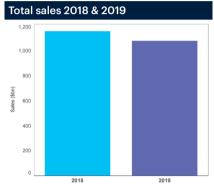
In 2019, chemicals producers globally were still lifting investments to take advantage of what had been growing markets. Capital spending data show an increase of 9.4% year on year.

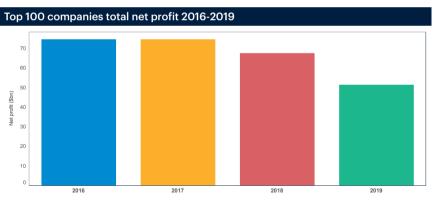
The increase in spending on research and development (R&D) in 2019 was much less, indicating, perhaps that some companies be-



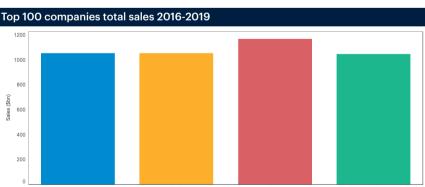












The financial outcome for producers so far this year has been stark with the second quarter felt currently to represent the low point for most players.

#### **Coronavirus dominates 2020**

Sales have been hard hit by the collapse in demand from key customer industries for chemicals worldwide. As producers and their employees went into varying forms of lockdown themselves, companies reacted swiftly to protect their balance sheets, access cash where they could, and cut costs hard.

Most have had to work on a much more justin-time or spot basis against the backdrop of the uncertainty that the pandemic has generated.

As that uncertainty possibly begins to lift, and despite repeated, more localised lock-downs, companies are more optimistic of a stronger second half of 2020. The annual data, however, will show a sharp fall for most if not all the metrics collected for the ICIS Top 100 listing for the year.

Infographics by Samantha Wright & Yashas Mudumbai



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lieve that cuts here can be more easily, as well as quickly, made.

The average increase in R&D spending by the Top 100 chemical companies in 2019 was 2.1%. There were step cuts in R&D spending for some, largely US-headquartered, companies. The pressure on chemical producers that was apparent towards the end of 2019 has, of course, paled as companies have had to face up to the impact of the coronavirus globally in 2020.

# The ICIS Top 100 Chemical Companies

Nigel Davis London, Joseph Chang New York & Will Beacham Barcelona

Rank 2019	Company	Sal 2019% d			ng profit change	Net in 2019%		Total A 2019% c		R8 2019%			oex change	Emplo 2019% c	
\$m, c	change in reporting currenci	es													
1	BASF	66,594	-1.5	4,549	-32.2	9,454	78.9	97,619	0.5	2,423	8.2	4,310	6.2	132,061	-3.9
2	Sinopec <sup>2</sup>	63,244	-6.9	2,463	-36.5	-	-	-	-	-	-	-	-	-	-
3	Dow 1	42,951	-13.4	-395	-	-1,272	-	60,524	-27.7	765	-4.4	1,961	-6.2	36,500	-32.4
4	LyondellBasell	34,727	-11.0	4,116	-21.3	3,397	-27.6	30,435	7.6	111	-3.5	2,694	28.0	19,100	-1.8
5	SABIC <sup>2</sup>	32,488	-19.0	3,680	-59.1	-	-	74,933	-3.2	-	-	-	-	-	-
6	INEOS <sup>2</sup>	32,103	-8.6	2,485	-39.0	-	-	-	-	-	-	-	-	23,015	13.9
7	ExxonMobil <sup>2</sup>	27,416	-15.5	-	-	592	-82.3	-	-	-	-	1,933	29.4	-	-
8	LG Chem	24,793	1.6	776	-60.1	326	-75.2	29,470	17.6	949	8.7	1,793	1.4	-	-
9	DuPont 1	21,512	-4.8	194	-70.4	498	-87.0	69,396	-63.1	955	-10.7	1,492	19.9	35,000	-
10	Sumitomo Chemical <sup>3</sup>	20,480	-4.0	1,265	-24.8	501	-64.3	33,588	15.1	-	-	1,108	-31.1	-	-
11	Toray <sup>3</sup>	20,378	-7.3	1,207	-7.3	513	-29.8	24,390	-4.9	-	-	-	-	-	-
12	Reliance Industries <sup>2</sup>	20,376	-15.6	3,583	-21.1	-	-	-	-	-	-	-	-	-	-
13	Mitsubishi Chemical Holdings <sup>2,3</sup>	19,679	-12.0	855	-54.3	-	-	21,143	-10.1	-	-	1,232	-1.4	-	-
14	Merck KGaA	18,134	8.9	2,380	22.8	1,486	-61.0	49,187	18.8	2,546	1.8	913	-10.7	64,034	10.3
15	Sherwin-Williams	17,901	2.1	2,215	28.7	1,541	39.0	20,496	7.1	103	98.1	329	31.1	61,111	2.3
16	SK Innovation <sup>2</sup>	15,804	-21.2	-	-	-	-	-	-	-	-	-	-	-	-
17	Braskem	15,497	-9.3	-14	-	-721	-	16,951	15.1	62	13.2	691	-16.3	-	-
18	PPG	15,146	-1.5	1,761	-1.5	1,269	-6.6	17,708	10.6	432	-2.0	1,056	33.8	47,500	0.4
19	Ecolab	14,906	1.6	2,014	3.4	1,559	9.1	20,869	4.0	209	-3.2	800	-5.5	50,200	-
20	Evonik	14,716	-1.2	1,219	3.5	2,364	126.0	24,725	8.6	481	-2.1	988	-7.2	36,401	-0.6
21	Shin-Etsu Chemical <sup>3</sup>	14,203	-3.2	3,736	0.6	2,889	1.6	29,725	6.3	447	-14.0	2,469	18.3	210	4.8
22	Covestro	13,935	-15.1	957	-67.0	625	-69.5	12,931	3.9	299	-3.6	1,102	40.9	19,245	3.2
23	PTT Global Chemical	13,872	-20.4	542	-65.6	415	-69.3	15,207	-3.6	-	-	1,338	43.5	233	7.7
24	Bayer <sup>2</sup>	13,315	11.6	-	-	-	-	-	-	-	-	-	-	-	-
25	Lotte Chemical	13,099	-5.9	-15	-	784	-48.2	17,360	-3.6	73	-8.4	773	-51.7	-	-
26	Solvay	12,605	-0.6	355	-68.0	176	-82.9	23,921	-3.2	363	8.8	1,086	16.1	27,119	-1.4
27	Mitsui Chemicals <sup>3</sup>	12,321	-9.7	659	-23.3	110	-84.9	13,619	-1.4	-	-	662	35.2	165	1.3
28	Indorama Ventures	11,852	1.6	387	-66.5	147	-83.4	12,789	0.4	14	2.5	560	2.0	781	29.1
29	Henkel Adhesive Technologies	10,622	0.6	1,831	-2.3	-	-	-	-	-	-	-	-	-	-
30	AkzoNobel	10,414	0.2	944	39.0	648	-91.4	14,577	-30.9	286	-3.4	240	16.3	20,321	-5.7
31	DSM	10,116	-2.8	1,071	-23.4	858	-29.2	15,092	-1.5	392	0.3	584	-8.0	24,895	5.7
32	Asahi Kasei <sup>2,3</sup>	10,058	-7.1	850	-28.7	-	-	-	-	-	-	-	-	-	-
33	Arkema	9,810	-0.9	905	-13.1	619	-22.9	12,324	8.6	280	5.1	681	8.2	23,023	2.5
34	Wanhua Chemical	9,773	-6.6	-	-	1,455	-34.9	13,911	11.3	245	4.7	-	-	-	-
35	Chevron Phillips Chemical	9,333	-17.5	-	-	1,760	-14.9	16,868	1.6	-	-	-	-	-	-
36	Eastman Chemical	9,273	-8.6	1,120	-27.8	762	-29.7	16,008	0.1	234	-0.4	425	-19.5	-	-
37	Borealis	9,097	-2.8	679	22.0	979	-3.8	11,359	1.7	163	13.3	422	15.3	6,590	-14.1
38	Sasol 2, 4	8,719	4.1	-6,815	-	-	-	-	-	-	-	-	-	-	-
39	SIBUR	8,558	-6.6	2,092	-21.3	2,277	27.6	23,549	16.2	-	-	2,295	-2.1	-	-

## SPECIAL REPORT TOP 100 CHEMICAL COMPANIES

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0	change in reporting currenci	es													
	Persian Gulf Petrochemical Industries Company (PGPIC)	8,355	-18.1	1,499	-39.8	2,097	-31.9	26,680	17.9	103	9.6	4,049	33.1	19,073	3.9
1	Westlake Chemical	8,118	-6.0	656	-53.4	421	-57.7	13,261	14.3	-	-	787	12.1	9,430	6.3
2	IRPC Public Company Ltd	8,042	-9.6	-12	-	-39	-	5,977	-2.5	-	-	200	-7.8	-	-
3	Tosoh <sup>3</sup>	7,927	4.7	973	-19.0	719	-12.0	8,081	3.8	153	7.4	597	64.2	119	2.9
4	LANXESS	7,637	-0.3	625	-4.1	230	-52.4	9,762	0.1	128	4.6	570	5.4	17,378	0.
5	DIC Corp	7,072	-4.6	380	-14.6	233	-25.0	7,389	0.2	115	-3.2	313	8.6	189	-0
6	Orbia Advance	6,987	-2.9	823	-12.0	327	-32.3	10,057	-0.2	-	-	261	-7.8	-	-
7	Formosa Plastics	6,941	-9.8	-	-	-	-	16,601	-0.9	-	-	-	-	246	2.
8	Huntsman	6,797	-10.6	469	-43.3	598	-8.0	8,320	4.6	137	-5.5	274	9.2	10,000	0.
9	Lonza	6,646	6.8	1,091	15.4	725	14.7	15,539	-0.6	138	11.8	850	43.4	17,366	0.
0	Givaudan	6,409	12.2	951	4.2	725	5.9	10,742	12.1	342	0.0	284	15.1	15,467	10
1	Nippon Paint	6,367	10.3	718	-9.8	301	-9.5	13,606	55.0	-	-	209	23.7	-	-
2	Alpek	6,347	-11.0	655	-41.7	350	-51.6	5,451	-14.3	2	-24.5	143	-20.1	318	3.
3	Celanese	6,297	-12.0	834	-37.5	852	-29.4	9,476	1.8	76	5.6	370	9.8	7,714	0.
4	Corteva <sup>2</sup>	6,256	-2.9	-	-	-	-	-	-	-	-	-	-	-	-
5	Olin	6,110	-12.0	205	-69.8	-11	-	9,188	2.1	-	-	386	0.3	6,500	0.
6	GS Caltex <sup>2</sup>	6,076	-13.7	376	-24.3	-	-	-	-	-	-	-	-	-	-
7	SCG <sup>2</sup>	5,969	-19.8	860	-33.4	520	-45.5	7,747	8.1	-	-	-	-	-	
8	Teijin <sup>2,3</sup>	5,832	-5.6	196	-9.3	-	-	6,120	-2.4	-	-	-	-	-	
9	Formosa Petrochemical <sup>2</sup>	5,747	-22.1	-	-	-	-	-	-	-	-	-	-	-	
0	Nouryon	5,706	0.4	-	-	-	-	-	-	-	-	-	-	-	
1	Honeywell <sup>2</sup>	5,688	-0.1	-	-	-	-	-	-	-	-	-	-	-	
2	Mitsubishi Gas Chemical <sup>3</sup>	5,644	-5.5	315	-17.2	225	-59.2	7,101	-4.0	180	5.4	390	7.9	-	
3	Sekisui Chemical <sup>2,3</sup>	5,627	-3.0	-	-	-	-	6,536	4.9	-	-	-	-	-	
4	Wacker-Chemie	5,533	-1.0	-602	-	-707	-	7,287	-8.8	194	4.8	427	-17.6	16,457	0.
5	Johnson Matthey 2,3	5,533	-1.0	715	-4.8	-	-	9,766	23.8	264	4.7	617	44.0	20,368	3.
6	Chemours	5,526	-16.8	84	-93.8	-52	-	7,258	-1.4	80	-2.4	481	-3.4	7,000	0.
7	RPM International 7	5,507	-1.0	509	15.2	305	13.8	5,631	3.5	77	6.9	148	8.0	14,621	-2
8	Kuraray	5,298	-4.5	498	-17.7	-8	-	9,120	4.7	195	0.0	801	32.1	102	3.
9	IFF	5,140	29.2	665	13.9	460	35.3	13,287	3.1	346	10.9	236	38.8	13,600	4.
0	Versalis	4,629	-19.5	-537	-	-600	-	2,975	-4.1	47	10.5	132	-21.3	5,977	1.
1	FMC	4,610	7.6	822	10.9	480	-6.3	9,873	-1.0	298	3.5	94	13.3	6,400	-12
2	Clariant	4,545	-0.1	170	-52.6	39	-89.3	8,244	0.0	214	-1.0	282	15.2	17,796	-3
3	Asahi Glass <sup>2</sup>	4,365	-1.6	579	-11.5	-	-	-	-	-	-	635	13.2	-	
4	JSR <sup>3</sup>	4,343	-4.7	303	-27.3	239	-22.5	6,236	-2.0			404	21.4	-	
5	Orica <sup>5</sup>	4,132	9.4	330	93.0	176	-817.1	5,127	1.8	-	_	211	58.7	8,435	4.
6	Occidental Chemical	4,102	-11.9	799	-31.1	-	-	4,361	0.0	_	-	272	-1.8	-	
7	Petronas Chemicals Group		-16.4	-	-01.1	-	-	9,500	4.0	-	-	-	-1.0	-	
8	Symrise Symrise	3,826	8.1	521	6.9	342	8.9	6,688	21.1	239	6.5	170	-28.8	11,105	4.
9	Daicel <sup>3</sup>	3,799	-11.2	471	-13.2	386	-5.7	5,502	-8.7	196	2.6	438	6.4	107	-5
0	Trinseo	3,776	-18.3	148	-64.3	92	-68.6	2,759	1.2	55	-1.8	110	-9.1	2,700	-5 8.
1	Showa Denko <sup>2</sup>	3,756	-4.1	284	-18.2	-	-00.0	2,759	-	-	-1.0	-	-9.1	2,700	0.
1 2	Hanwha Solutions <sup>2</sup>	3,754	-4.1	125	-10.2			8,689	2.4			413	38.7	-	
2 3	Kaneka <sup>2,3</sup>					-	-			-	-				
ა 4	Albemarle	3,650	-3.9	320	-15.2	- 604	- 19.3	3,816	1.0	- 50	-171	952	21.7	6,000	1
		3,589	6.3	666	-27.0	604	-18.3	9,861	30.1	58	-17.1	852	21.7		1.
5 6	NOVA Chemicals	3,576	-19.9	- 201	- 77	214	-225.1	9,904	2.1	120	- 27	793	76.6	-	•
6 7	Denka <sup>3</sup>	3,504	-7.8 11.1	291	-7.7	209	-9.4	4,614	3.6	138	2.7	340	12.5	4.000	
7	Hexion Cabot <sup>5</sup>	3,374	-11.1	45	-80.2	2,807	-1,822.1	4,146	111.4	50	-5.7	101	12.2	4,000	0.
8	Lanory	3,337	2.9	314	83.6	186	-351.4	3,004	-7.4	60	-9.1	224	-2.2	4,500	-2

Rank 2019	Company	Sal 2019% c			ng profit change		ncome change	Total <i>A</i> 2019% (			&D change		pex change	Emplo 2019% (	
\$m, o	change in reporting currenci	ies													
90	Kemira	2,985	2.5	218	31.1	131	23.2	3,246	4.6	34	0.0	226	34.0	5,683	3.0
91	Zeon <sup>3</sup>	2,963	-4.6	240	-21.2	187	8.3	3,728	-4.7	-	-	200	80.9	-	-
92	H.B. Fuller <sup>6</sup>	2,897	-4.7	264	3.1	131	-23.4	3,986	-4.5	37	2.8	62	-8.8	6,400	-1.5
93	Fuchs Petrolub	2,888	0.2	360	-16.2	256	-20.8	2,271	7.0	62	5.8	173	27.3	6,317	3.3
94	PolyOne (now Avient)	2,863	-0.6	157	-12.3	589	268.1	3,273	20.2	51	2.0	82	7.9	5,600	-15.2
95	Nippon Shokubai <sup>3</sup>	2,780	-10.8	121	-49.6	107	-52.4	4,377	-1.3	136	5.6	297	-0.3	-	-
96	CEPSA <sup>2</sup>	2,702	-9.1	-	-	-	-	-	-	-	-	-	-	-	-
97	Tronox	2,642	45.2	95	-52.5	-97	-	5,268	13.5	17	54.5	198	69.2	6,600	98.2
98	Ube <sup>2,3</sup>	2,624	-11.8	134	-40.9	-	-	3,173	-3.3	-	-	-	-	-	-
99	Altana	2,525	-2.5	294	-11.5	190	-9.6	3,753	3.8	186	7.8	176	-16.0	7,271	0.7
100	Ashland ⁵	2,493	-3.7	166	62.7	505	343.0	5,818	-11.1	66	-9.6	154	-1.9	4,700	-21.7

### **Bubbling under**

Rank 2019	Company	Sa 2019%			ng profit change		ncome change		Assets change		&D change		pex change	Emplo 2019% (	
\$m, c	Sm, change in reporting currencies														
101	Petro Rabigh <sup>2</sup>	2,183	-14.3	148	-71.0	-	-	13,323	32.5	-	-	891	21.4	-	-
102	Venator	2,130	-6.0	13	-109.9	-170	-	2,265	-8.9	15	-11.8	152	-53.4	4,000	-7.0
103	Petkim Petrokimya	1,962	25.3	204	2.5	128	-8.6	1,605	19.4	4	13.6	110	-14.5	428	-0.5
104	W.R. Grace	1,958	1.3	260	-20.0	127	-24.0	3,933	10.3	65	3.2	194	-10.2	4,000	2.6
105	Tessenderlo	1,957	7.5	138	11.8	110	6.5	2,145	4.0	13	9.1	116	25.6	5,324	2.1
106	Synthomer	1,936	-9.9	147	-14.0	114	-16.5	1,670	-1.9	23	0.0	92	-9.2	3,784	-1.9
107	Stepan	1,859	-6.8	127	-14.8	103	-7.2	1,579	4.2	55	1.9	106	21.8	2,284	1.5
108	Kraton	1,804	-10.3	119	-52.6	56	-21.1	2,832	-2.2	41	0.0	105	1.9	1,944	1.4
109	Incitec Pivot 2,5	1,800	4.9	290	-14.7	-	-	5,070	4.3	-	-	37	89.3	-	-
110	Minerals Technologies	1,791	-0.9	209	-18.4	136	-21.4	3,112	0.8	20	-13.0	65	-14.5	3,628	10.9
111	Kronos Worldwide	1,731	4.2	146	-55.8	87	-57.6	1,966	3.6	17	6.3	55	-1.8	2,200	0.2
112	Innospec	1,513	2.4	150	11.9	112	31.8	1,469	-0.3	35	6.1	30	3.4	2,000	0.0
113	Tata Chemicals <sup>3</sup>	1,496	-0.7	223	-11.2	957	245.8	3,893	3.1	-	-	168	10.8	-	-
114	ICL (Israel Chemicals Ltd) <sup>2</sup>	1,318	1.7	338	-73.6	-	-	-	-	-	-	66	32.0	-	-
115	AdvanSix	1,297	-14.4	53	-38.4	41	-37.9	1,236	19.4	14	-6.7	150	37.6	1,520	2.4
116	Ingevity	1,293	14.0	275	9.1	184	1.1	2,142	62.9	20	-9.1	115	22.3	1,850	5.7
117	Industries Qatar <sup>2</sup>	1,209	-24.1	-	-	359	-47.3	-	-	-	-	-	-	-	-
118	Quaker Chemical	1,134	30.6	46	-47.7	32	-46.7	2,850	301.4	32	28.0	16	23.1	4,500	108.3
119	Ferro	1,018	-5.9	64	-29.7	7	-91.4	1,835	-1.7	41	2.5	65	-19.8	5,922	-2.3

Footnotes	Currency exchange rates									
¹ Pro forma	31 December 2019 - \$1	=	Thai baht	29.7574711						
<sup>2</sup> Chemicals only	Euro	0.890709299	Mexican peso	18.85817676						
<sup>3</sup> Fiscal year ended 31 March 2020	British pound	0.753720594	South African rand	13.97828978						
<sup>4</sup> Fiscal year ended 30 June 2020	Indian rupee	71.29215278	Brazilian real	4.019162857						
<sup>5</sup> Fiscal year ended 30 September 2019	Australian dollar	1.422572214	South Korean won	1,154.541861						
<sup>6</sup> Fiscal year ended 30 November 2019	Canadian dollar	1.296209415	Qatari riyal	3.64						
<sup>7</sup> Fiscal year ended 31 May 2020	Singapore dollar	1.344706464	Saudi riyal	3.75						
	Swiss franc	0.967817577	Russian rouble	62.0836456						
Note: Operating earnings (EBIT) and net	Malaysian ringgit	4.090666963	New Taiwan dollar	29.94384457						
income are as reported (not adjusted for	Japanese yen	108.6794158	Turkish lira	5.949829865						
special items)	Chinese yuan	6.963042468								