

# TOP 50 U.S. CHEMICAL PRODUCERS

Financial results reflect the economic challenges of 2012, but stock values point to **OPTIMISM**

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**C&EN'S LATEST SURVEY** of the Top 50 U.S. chemical companies reveals a chemical industry that, although healthy, is in no better condition than it was a year ago. Both sales and profits for the largest chemical makers were down slightly in 2012, the period of record for the survey.

However, chemical company stock prices rose strongly over the course of the year. Investors are apparently sending a signal: The sluggishness experienced by the global economy in 2012 was only temporary, and many of the problems that worried investors early in the year—including a European recession and softness in China—will be overcome.

In his letter to shareholders, Andrew N. Liveris, chief executive officer of Dow Chemical, noted the challenges he faced navigating his firm, again number one in C&EN's ranking, through a difficult year. "The world continued its rocky recovery in 2012, with volatility and uncertainty proving to be the new normal," he wrote. "Persistent weakness in Europe was a continued drag on global [economic] growth, while dramatic declines in China, Brazil, and other emerging geographies introduced new risks to a sustained recovery."

U.S. chemical companies were pulled down by these factors, but not sharply. Combined sales for the Top 50 were \$318.7 billion, a 3.1% decline

from 2011. Twenty-six of the companies—and seven of the top 10—posted sales declines. Although the sales figure can be

considered a disappointment, it should be noted that the 2011 total was a record.

Profits also fell. The 42 chemical firms in the ranking that report operating profits together posted a 3.2% decrease to \$38.9 billion. As was the case for sales, the comparison year of 2011 was a record for chemical company profitability.

Only one firm, Ferro Corp., reported a loss. Ferro is a company in turmoil. Its CEO resigned last year. Activist shareholders are trying to get new directors elected to its board. And it is fending off a hostile takeover attempt by plastics compounding firm A. Schulman.

Mergers and acquisitions had a big impact on the Top 50 ranking this year. Four firms that previously appeared didn't make the list this year because of acquisitions.

TPC Group, number 30 in 2012, was acquired by the private equity firms SK Capital Partners and First Reserve and no longer reports its results. Solutia, number 34 last year, was purchased by tenth-ranked Eastman Chemical. Titanium dioxide maker Tronox, number 37 in last year's survey, merged with the mineral sands business of Exxaro Resources and now has its headquarters in Australia. Sunoco, number 45 last year, exited chemicals through deals such as the sale of its polypropylene business to Brazil's Braskem.

## OTHER TRANSACTIONS

made chemical firms move up and down the ranking. Ashland jumped to 14, from 20 the year before, thanks to a full year of regular operations after its 2011 purchase of International Specialty Products. Cytec Industries dropped to 35, from 26, largely because of the divestiture of its coatings resins business to the private equity firm Advent International.

Mergers and acquisitions activity also influenced C&EN's

## MARKET CAPITALIZATION

DuPont slipped but held on to the lead for the third consecutive year

RANK		COMPANY	MARKET CAP (\$ MILLIONS) 2012	CHANGE FROM 2011
2012	2011			
1	1	DuPont	\$41,966	-1.0%
2	2	Dow Chemical	38,903	14.2
3	3	Praxair	32,419	1.6
4	4	Mosaic	24,107	12.4
5	6	PPG Industries	20,790	63.9
6	5	Air Products	17,443	-2.8
7	7	CF Industries	12,799	35.0
8	11	Eastman Chemical	10,473	95.9
9	8	Sigma-Aldrich	8,830	16.8
10	10	FMC Corp.	8,058	34.2
11	9	Celanese	7,107	2.6
12	13	Ashland	6,352	41.9
13	12	Albemarle	5,522	20.7
14	16	Westlake Chemical	5,305	98.3
15	14	W.R. Grace	5,083	49.8
16	15	Rockwood Specialties	3,883	28.2
17	18	Huntsman Corp.	3,789	60.8
18	17	NewMarket Corp.	3,513	32.4
19	21	Cytec Industries	3,090	52.1
20	22	Cabot Corp.	2,547	25.8
21	20	Kronos Worldwide	2,260	8.1
22	25	Chemtura	2,083	90.8
23	24	H.B. Fuller	1,738	51.9
24	23	Olin	1,732	10.0
25	30	Axiall	1,424	113.7
26	27	Stepan	1,222	49.4
27	26	Innophos	1,014	-3.4
28	32	Innospec	804	24.5
29	29	Koppers	786	11.0
30	31	Kraton Polymers	776	19.1
31	28	OM Group	708	-0.8
32	25	Ferro Corp.	390	-14.5
33	35	Omnova	329	56.1

**NOTE:** Based on share prices on Dec. 31, 2012 and Dec. 30, 2011. These 33 companies are firms on the Top 50 list that generate more than half of their revenues through chemical manufacturing.

**Investors are apparently sending a signal: The sluggishness experienced by the global economy in 2012 was only temporary.**

## TOP 50 U.S. CHEMICAL FIRMS

Revenues declined at most large companies because of economic woes in 2012

RANK	2012	2011	COMPANY	CHEMICAL SALES	CHANGE	CHEMICAL SALES AS	HEADQUARTERS	CHEMICAL OPERATING PROFITS <sup>a</sup>	CHANGE	CHEMICAL OPERATING PROFITS AS	OPERATING PROFIT	IDENTIFIABLE CHEMICAL ASSETS	CHEMICAL ASSETS AS % OF	OPERATING RETURN ON CHEMICAL ASSETS <sup>c</sup>
				(\$ MILLIONS)	FROM 2011	% OF TOTAL SALES		(\$ MILLIONS)	FROM 2011	% OF TOTAL OPERATING PROFITS	MARGIN <sup>b</sup>	(\$ MILLIONS)	ASSETS	% OF TOTAL ASSETS
1	1	Dow Chemical	\$56,786	-5.3%	100.0%	Midland, Mich.	\$4,425	-2.1%	100.0%	7.8%	\$69,605	100.0%	6.4%	
2	2	ExxonMobil	38,726	-7.7	8.5	Irving, Texas	4,885	-16.9	6.4	12.6	26,124	7.8	18.7	
3	3	DuPont <sup>d</sup>	30,216	-13.1	86.8	Wilmington, Del.	4,688	-15.5	97.0	15.5	16,243	64.0	28.9	
4	5	PPG Industries	14,168	2.5	93.2	Pittsburgh	2,199	13.9	97.2	15.5	10,990	69.2	20.0	
5	4	Chevron Phillips	13,307	-4.5	100.0	The Woodlands, Texas	na	na	na	na	9,409	100.0	na	
6	6	Praxair <sup>d</sup>	11,224	-0.2	100.0	Danbury, Conn.	3,460	-0.1	100.0	30.8	18,090	100.0	19.1	
7	7	Huntsman Corp.	11,187	-0.3	100.0	Salt Lake City	931	23.6	100.0	8.3	8,884	100.0	10.5	
8	8	Mosaic <sup>e</sup>	11,108	11.8	100.0	Plymouth, Minn.	2,675	-2.7	100.0	24.1	16,690	100.0	16.0	
9	9	Air Products <sup>f</sup>	9,192	-5.1	95.6	Allentown, Pa.	1,582	-2.6	97.3	17.2	15,574	91.9	10.2	
10	11	Eastman Chemical	8,102	12.9	100.0	Kingsport, Tenn.	920	-9.2	100.0	11.4	11,619	100.0	7.9	
11	10	Momentive	7,113	-9.3	100.0	Columbus, Ohio	465	-39.7	100.0	6.5	6,229	100.0	7.5	
12	12	Celanese	6,418	-5.1	100.0	Dallas	583	-27.3	100.0	9.1	9,000	100.0	6.5	
13	17	Honeywell <sup>d</sup>	6,184	9.3	16.4	Morristown, N.J.	1,154	10.7	19.6	18.7	6,396	15.3	18.0	
14	20	Ashland <sup>f</sup>	6,172	36.2	75.2	Covington, Ky.	628	108.6	72.7	10.2	9,665	90.5	6.5	
15	13	Dow Corning	6,119	-4.8	100.0	Midland, Mich.	na	na	na	na	13,301	100.0	na	
16	15	CF Industries	6,104	0.1	100.0	Long Grove, Ill.	2,962	7.1	100.0	48.5	10,167	100.0	29.1	
17	14	Lubrizol	6,100	0.0	100.0	Wickliffe, Ohio	na	na	na	na	na	na	na	
18	16	Styron	5,500	-8.3	100.0	Berwyn, Pa.	na	na	na	na	na	na	na	
19	19	Ecolab	5,161	11.0	43.6	St. Paul	682	27.2	53.1	13.2	11,215	63.8	6.1	
20	18	Occidental Petroleum	4,580	-4.9	18.9	Los Angeles	720	-16.4	9.3	15.7	3,854	6.0	18.7	
21	22	FMC Corp.	3,748	11.0	100.0	Philadelphia	696	12.4	100.0	18.6	4,374	100.0	15.9	
22	23	Monsanto <sup>g</sup>	3,715	14.7	27.5	St. Louis	477	69.8	15.7	12.8	4,280	21.2	11.1	
23	21	Westlake Chemical	3,571	-1.3	100.0	Houston	615	37.7	100.0	17.2	3,412	100.0	18.0	
24	25	Cabot Corp. <sup>f</sup>	3,300	6.4	100.0	Boston	290	19.3	100.0	8.8	4,399	100.0	6.6	
25	24	W.R. Grace	3,156	-1.8	100.0	Columbia, Md.	564	7.5	100.0	17.9	5,090	100.0	11.1	
26	27	Rockwood Specialties	2,819	-7.7	80.4	Princeton, N.J.	363	-26.3	75.1	12.9	4,070	68.1	8.9	
27	29	Albemarle	2,745	-4.3	100.0	Richmond, Va.	518	-11.9	100.0	18.9	3,437	100.0	15.1	
28	31	Axiall	2,685	4.3	80.7	Atlanta	302	96.4	94.3	11.2	1,147	63.6	26.3	
29	28	Chemtura	2,629	-13.1	100.0	Philadelphia	348	0.3	100.0	13.2	3,030	100.0	11.5	
30	33	NewMarket Corp.	2,212	3.5	100.0	Richmond, Va.	366	21.1	100.0	16.5	1,258	100.0	29.1	
31	35	Kronos Worldwide	1,976	1.7	100.0	Dallas	377	-31.9	100.0	19.1	2,027	100.0	18.6	
32	39	H.B. Fuller <sup>h</sup>	1,886	21.1	100.0	St. Paul	163	26.0	100.0	8.6	1,786	100.0	9.1	
33	36	Stepan	1,804	-2.1	100.0	Northfield, Ill.	129	8.6	100.0	7.1	986	100.0	13.1	
34	32	Ferro Corp. <sup>d</sup>	1,769	-18.0	100.0	Mayfield Heights, Ohio	-5	def	def	def	1,079	100.0	def	
35	26	Cytec Industries	1,708	-44.4	100.0	Woodland Park, N.J.	326	5.8	100.0	19.1	3,922	100.0	8.3	
36	40	Sigma-Aldrich	1,574	4.7	60.0	St. Louis	na	na	na	na	na	na	na	
37	41	Kraton Polymers	1,423	-1.0	100.0	Houston	102	-45.4	100.0	7.2	1,229	100.0	8.3	
38	42	Olin	1,411	1.6	64.6	Clayton, Mo.	263	7.4	81.5	18.7	1,782	64.1	14.8	
39	39	Goodyear	1,260	-20.9	6.0	Akron, Ohio	na	na	na	na	na	na	na	
40	43	Reichhold	1,162	-1.8	100.0	Research Triangle Park, N.C.	na	na	na	na	na	na	na	
41	—	Taminco	1,116	-0.6	100.0	Allentown, Pa.	120	-23.1	100.0	10.8	1,847	100.0	6.5	
42	46	Koppers	1,106	8.9	71.1	Pittsburgh	83	-6.7	65.6	7.5	516	66.2	16.1	
43	48	MeadWestvaco	939	15.8	17.2	Richmond, Va.	224	10.3	32.1	23.9	506	9.1	44.3	
44	47	Omnova <sup>i</sup>	865	-9.2	76.8	Fairlawn, Ohio	90	3.6	95.9	10.4	543	62.1	16.5	
45	44	OM Group	864	-22.2	52.8	Cleveland, Ohio	44	-69.0	nm	5.1	1,092	43.7	4.1	
46	48	Innophos	862	6.4	100.0	Cranbury, N.J.	110	-19.7	100.0	12.8	739	100.0	14.9	
47	50	Innospec	776	0.3	100.0	Littleton, Colo.	100	91.0	100.0	12.8	579	100.0	17.2	
48	—	Petrologistics	751	22.1	100.0	Houston	144	221.9	100.0	19.2	798	100.0	18.1	
49	—	PolyOne <sup>d</sup>	704	29.2	23.5	Avon Lake, Ohio	67	53.9	40.0	9.5	888	41.7	7.5	
50	—	Emerald Performance Materials	700	5.3	100.0	Cuyahoga Falls, Ohio	na	na	na	na	na	na	na	

<sup>a</sup> Operating profit is sales less administrative expenses and cost of sales. <sup>b</sup> Operating profit as a percentage of sales. <sup>c</sup> Chemical operating profit as a percentage of identifiable assets. <sup>d</sup> Sales include a significant amount of nonchemical products. <sup>e</sup> Fiscal year ended May 31. <sup>f</sup> Fiscal year ended Sept. 30. <sup>g</sup> Fiscal year ended Aug. 31. <sup>h</sup> Fiscal year ended Dec. 31. <sup>i</sup> Fiscal year ended Nov. 30. **na** = not available. **nm** = not meaningful. **def** = deficit.

ranking of the Top 25 foreign firms by U.S. chemical sales. For example, Solvay climbed to number eight because of its 2011 acquisition of French chemical maker Rhodia. AkzoNobel fell four spots to number nine after selling its U.S. architectural paints business to PPG Industries.

Christopher D. Cerimele, director of the chemical practice at the investment banking firm Houlihan Lokey, has seen a pickup in deal-making over the past year. Companies that are selling are trying to get rid of divisions that are no longer a good fit, he says, and those that are acquiring want operations that line up closely with what they already have.

**A DECADE AGO**, in contrast, companies often ventured into unfamiliar territory for greater size and diversification. “Companies in this market are not making big stretches to grow revenues,” Cerimele says. “Now there is a strong strategic rationale.”

Private equity firms are also eyeing the chemical industry, Cerimele says. Financing, which took a hiatus during the housing



meltdown, has come back strong, largely because of central bank policies around the world aimed at stimulating economies with low interest rates.

“The financing markets are as good as they have ever been,” he says.

**ALL CLEAR** Workers in the control room at Air Products & Chemicals' Pasadena, Texas, customer service center.

Private equity firms also have a positive impression of the chemical sector, according to Cerimele. “They see it as an attractive sector within industrials right

now,” he says. Because chemical companies supply every sector of the economy, a chemical investment is a way for a private equity firm to position itself for a strong recovery ahead.

Stock buyers seem to agree. C&EN's ranking of firms by market capitalization shows that 2012 was a good year for chemical stock prices. The combined market capitalization for the 33 publicly traded chemical firms in the Top 50 was \$277.2 billion at the end of 2012, an 18.1% increase from 2011. In contrast, the Standard & Poor's 500 stock index rose 13.4% during the year.

DuPont held on to the top spot in this ranking, despite a 1.0% decline in its market cap. Its margin over number two Dow shrank to \$3.1 billion from \$8.3 billion the year before.

There were a few impressive gainers in the capitalization ranking. Axiall, the polyvinyl chloride and chlor-alkali firm formerly known as Georgia Gulf, enjoyed a 113.7% increase in market cap to \$1.4 billion. Axiall is merging with PPG's commodity chemicals business. Three other firms—Eastman, Westlake Chemical, and Chemtura—each posted gains of more than 90%.

If the instincts of stock investors and private equity firms turn out to be correct, C&EN's 2014 U.S. Top 50 will reflect strong improvement in the chemical sector. Perhaps the industry will even return to hitting records for sales and profits. ■

## STRONG YEAR

Foreign-owned chemical firms mostly saw strong increases

RANK		COMPANY	U.S. CHEMICAL SALES (\$ MILLIONS) 2012	CHANGE FROM 2011	U.S. CHEMICAL SALES AS % OF TOTAL U.S. SALES	COUNTRY
2012	2011					
1	1	BASF	\$18,772	-0.9%	100.0%	Germany
2	2	LyondellBasell Industries	12,934	-13.1	100.0	Netherlands
3	3	Agrium <sup>a</sup>	10,776	12.8	100.0	Canada
4	4	Bayer	5,908	20.5	48.0	Germany
5	6	Air Liquide	3,996	8.7	100.0	France
6	7	Evonik Industries	3,116	-12.4	100.0	Germany
7	15	Linde	3,095	44.6	91.9	Germany
8	22	Solvay	3,002	100.6	100.0	Belgium
9	5	AkzoNobel	2,950	-30.8	100.0	Netherlands
10	10	Alfa Group	2,935	15.7	64.0	Mexico
11	8	Braskem	2,889	12.1	100.0	Brazil
12	12	Arkema	2,819	12.6	100.0	France
13	17	Indorama	2,719	36.5	100.0	Thailand
14	9	Potash Corp.	2,648	2.8	100.0	Canada
15	14	Syngenta	2,577	19.4	65.6	Switzerland
16	11	Nova Chemicals	2,309	-8.7	100.0	Canada
17	16	Yara	2,253	10.7	100.0	Norway
18	18	DSM	2,093	8.2	100.0	Netherlands
19	20	Lanxess	2,071	10.5	100.0	Germany
20	21	Sasol <sup>b</sup>	2,031	26.2	100.0	South Africa
21	19	Shin-Etsu Chemical <sup>c</sup>	2,000	4.3	100.0	Japan
22	23	Lonza	1,803	48.2	100.0	Switzerland
23	13	Total	1,759	-28.3	7.8	France
24	25	Israel Chemical	1,115	8.1	100.0	Israel
25	—	Wacker Chemie	1,051	4.4	100.0	Germany

**NOTE:** Figures from companies that report in native currencies were converted to dollars at average annual exchange rates from the Federal Reserve. **a** Sales include a significant amount of nonchemical products. **b** Fiscal year ended June 30. **c** Fiscal year ended March 31.