

CHEMICAL INSIGHTS



The Gold Rush: Chemicals M&A 2016 - 2017

2015 was a record year for M&A, with over \$4.5 trillion in transactions worldwide, surpassing the previous record set in 2007. Chemical transactions were a big contributor to that total, with at least eleven deals with values greater than \$1.0 billion. The merger of Dow Chemical and DuPont, initially valued at \$120 billion, was the second largest deal announced in 2015 after the \$160 billion Pfizer/Allergan merger. Many analysts expected 2016 to be strong, but as we write this in the closing days of the year, it now appears that 2016 chemical deal values will not quite measure up to 2015. But that may be only because deals are not counted until they close. If you count them by when they are announced, 2016 compares well with 2015 and may surpass it in total value. Many of the transactions announced in 2016, including four with values greater than \$10 billion, are not expected to close until 2017. The Dow/DuPont deal has also been delayed until 2017.

Our view from the ground is that we are in the midst of a “gold rush” in chemical transactions. Deal activity in chemicals can only be described as frenetic. The environment is nearly ideal: low interest rates, cash-rich strategics and private equity groups, and high valuations are driving activity. 2016 had its share of billion dollar plus transactions, but there was also a lot going on in the middle market. In this issue of *Chemical Insights*, we will review some of the highlights and drivers of chemicals M&A in 2016, and take a look at what we expect for 2017.

The Economy and Politics: The economy by most measures is in very good shape. According to the most recent Case-Shiller Home Price Indices, home values, which have been a consistent drag on the economy since the Great Recession, have finally surpassed 2007 levels. A parallel improvement in the building markets is reflected in the strength of the M&A environment for construction related companies. We know this anecdotally from a number of Grace Matthews’ 2015-2016 building materials clients that all had robust market interest and received full valuations.

The unemployment rate at 4.6% is near what most economists believe to be the full employment level. In another sign of the growing strength of the economy, the Federal Reserve raised its discount rate in mid-December, and appears ready to raise it again, probably several times, in 2017. The stock market shook off any uncertainties that may have been due in part to the national elections, with the major indexes setting record highs in December.

Commodity prices firmed up over the course of the year. In the wake of the OPEC decision in November to cut back crude oil production, the price of Texas crude is trading above \$50 a barrel and may go higher. Natural gas prices also staged a comeback in 2016, although they are still well below their 2014 highs. Higher oil and gas prices will have mixed effects on the economy. Many domestic oil wells that were shut down in 2015 because of low oil prices will be brought back online, giving that industry a much needed boost, and increasing demand for oilfield and water treatment chemicals. But higher oil and gas prices also means upward pressure on petrochemical feedstock pricing, and downstream producers are likely to experience some pressure on margins. M&A valuations for high value-added petrochemical businesses were robust, including Grace Matthews' clients BASF, which sold its polyolefin catalyst business to WR Grace, and TPC Group, which sold its propylene derivatives manufacturing facility in Baytown, TX to SI Group.

Of course, the wildcard for the economy and chemical industry is the incoming Trump administration. As many would acknowledge, there have been inconsistencies in President-elect Trump's policy proposals during the campaign and transition. It's difficult to say exactly where he will take the country, but there are a few areas of relevance to the chemical industry that are coming into focus. With the Republican Party controlling both the executive branch and Congress, we can expect a relatively more business friendly agenda. President Trump and Congress will likely roll back government regulation in areas that include the environment, energy, finance, and healthcare. The nomination of Scott Pruitt, Oklahoma's current attorney general, to head the Environmental Protection Agency bodes well for a less activist EPA. The President-elect has also spoken out against free trade, but he is likely to receive strong push back – even from his own party – if he tries to dismantle trade deals like NAFTA or the TPP. Tax reform that includes corporate tax cuts and provisions to encourage repatriation of off-shore cash would also be positive for the chemicals and building materials industries.

On the whole, the stage is set for a very good environment for chemicals M&A going forward. Many of the same investment themes we have observed in past years are still in effect: portfolio realignment to reallocate resources to core businesses and reinforce competitive advantages, "bolt-on" acquisitions to build scale and create synergies, acquisitions to accelerate growth in a slow economy, and acquisitions to take advantage of low interest rates and access to credit before the lending environment inevitably tightens.

Mega-Deals and Hot Sectors: In a previous newsletter, we described how very large transactions can fundamentally transform an industry or sector, prompting additional M&A activity and having ripple effects on competitors, customers, and suppliers. In 2016, we saw large transactions and heightened activity in three chemical sectors: agricultural chemicals, coatings, and distribution. Agricultural chemicals have been a strong sector in M&A for a few years now, prompted in part by low commodity prices that forced some firms to merge in order to stay competitive. The pending merger of Dow Chemical and DuPont appears to have kicked off a new round of "mega" mergers in the sector, given Dow/DuPont's post-merger plan to spin out its combined seeds and pesticides business, which

will displace Monsanto as the #1 player in several of its markets. In 2015, Monsanto made several offers to acquire Syngenta that would have allowed it to retain its market share, but Syngenta accepted a \$43 billion (\$44.8 billion with assumed debt) bid from ChemChina last February. Under pressure to do something big, Monsanto agreed to be acquired by Bayer in May. That deal, valued at \$65 billion, was the second largest deal announced in 2016 after AT&T's bid to acquire Time Warner, and also will be the largest all cash deal on record. Another large transaction in the works is an \$18 billion merger of the Canadian firms Potash Corp. and Agrium. All of the agrochemical deals described above are under regulatory scrutiny, and should close in 2017. And there was more going on other than large transactions; as of early December, we counted over 75 middle market deals (< \$1 billion in value) in 2016 worldwide involving seeds, crop protection, fertilizers, and other agricultural chemicals.

Coatings is an area where Grace Matthews accurately predicted a large cap deal in 2016 (in our Winter 2015-2016 edition of *Chemical Insights*). Given the concentration in the paints and coatings industry, and especially in architectural coatings,

Chemical Transactions Greater Than \$5.0 Billion: 2015 - 2016

(\$ billions)	Enterprise Value	Announced	Closed
Dow Chemical / DuPont	\$142.4	Dec-15	Pending
Bayer / Monsanto	\$65.1	Sep-16	Pending
ChemChina / Syngenta	\$44.8	Feb-16	Pending
Potash / Agrium	\$18.3	Sep-16	Pending
Air Liquide / Airgas	\$13.1	Nov-15	May-16
Sherwin-Williams / Valspar	\$11.3	Mar-16	Pending
Equate Petrochemical / MEGlobal	\$6.4	Oct-15	Dec-15
Solvay / Cytec	\$6.4	Jul-15	Dec-15

many industry insiders may have thought that a transformational merger between two of the top five global coatings companies would be unlikely to get past anti-trust regulators, and thus were taken by surprise by the announcement last March of the proposed merger between Sherwin-Williams and Valspar. It appears that the only significant overlap between Sherwin-Williams and Valspar is in North American architectural coatings, so the deal, valued at \$11.3 billion and slated to close in Q1 2017, is likely to pass regulatory review and require minimal, if any, divestitures. When it closes, Sherwin-Williams/Valspar will surpass PPG as the largest coatings company in the world. The transaction is likely to act as a catalyst for additional M&A activity in 2017 and the years ahead. Indeed, it appears that it already has; as this newsletter goes to press, Nippon Paint and Dunn Edwards -- the eighth largest North American coatings manufacturer -- have announced that they will merge. Based in Osaka, Japan, Nippon Paint already has a North American presence in coatings for automotive plastics; the Dunn Edwards deal will now give Nippon a platform to grow in architectural coatings in the North American markets.

The Nippon Paint/Dunn Edwards transaction, with a global player acquiring a well-established "super-regional" company, may be a template for future M&A deals. The coatings industry is dominated by a handful of increasingly globalized behemoths -- nearly all "household" names within the industry -- but after the top ten, there is a steep drop in size. Below about \$1.0 billion in revenues, there are hundreds of middle-market regional or niche market firms. The majors are continuing to "roll-up" the smaller companies through acquisitions, as is private equity. Industrial coatings, perhaps because of the diversity of end use applications, seems to be an especially strong area of interest. The scarcity of mid-sized coatings players should create high levels of demand and healthy valuations. We saw this directly with some of our recent sell-side clients in the hundred million to billion dollar range including Spraylat, Jones-Blair, Henry Company, Ennis-Flint, and California Products.

Chemicals distribution is another area that experienced a pick-up in M&A activity in 2016. The structure of the chemicals distribution industry in many respects is similar to coatings: a small number of multi-national companies -- Brenntag, Univar, IMCD, Azelis, and Nexeo Solutions -- have the lion's share of the markets, and are followed by a host of smaller, specialized or regional distributors that serve small customers and which typically compete by offering value-added services. Also like coatings, this industry structure is tailor made for consolidation. All of the large distributors have gone public since 2010 (except for Azelis, which is planning an IPO before 2020), and have used part of their IPO proceeds to roll up the smaller firms. In 2016, the largest distribution deal was WL Ross Holding's acquisition of Nexeo for \$1.6 billion. (WL Ross Holding changed its name to Nexeo Solutions, Inc. at the closing). Brenntag was active in 2016, having announced seven transactions, and IMCD and Univar announced two each. The challenge for these larger firms when they purchase a smaller distributor is to balance the cost advantages of large scale with the "high-touch" value-added service models of the smaller companies. An example is Univar's purchase of Bodine Services, a Midwestern provider of waste management and environmental and facilities maintenance services. The acquisition supports Univar's strategy to create national platform for Univar's waste management services under the ChemCare® trade name, but with Bodine becoming a wholly-owned subsidiary and maintaining its regional identity. We currently have several distribution deals in the market, and interest levels remain high.

Private Equity Still in the Game: Private equity's recipe for success in the chemicals markets remains intact: acquire a quality "platform" company, build it up with "bolt-on" acquisitions, develop synergies and pay down debt, and then make a profitable exit, preferably to a strategic buyer that will support a high valuation. Active in 2016 was Audax Group, which formed ICP Group (Innovative Chemical Products Group) to acquire coatings and adhesives companies. In 2016, ICP established a platform for adhesives and sealants in the roofing, insulation, and construction markets by acquiring a pressurized polyurethane foam business, the former Polyfoam Products, Inc. in January, and followed up in April with the purchase of Fomo Products. In March, Arsenal Capital Partners also formed a new platform, Elite Comfort Solutions, with the acquisition of three specialty polyurethane foam businesses: Elite Foam, HSM Foam, and Pacific Urethanes. The new platform completed its first bolt-on deal less than a month later by acquiring another urethane foam manufacturer, Peterson Chemical Technology. Arsenal added to its other chemical platforms in 2016 as well. Accela Performance Materials (also focused on polyurethane technologies) acquired Quadrant Urethane Technologies Spray Foam Division, and its platform for specialty polymers and additives Polymer Solutions Group acquired three businesses: Sasco Chemical, Flow Polymers, and Alkon Solutions. American Securities acquired two companies in 2016, Henry Company and Chromaflo, that are complementary to Royal Adhesives, which it acquired from Arsenal in 2015.

"...the combination of higher interest rates and relatively high valuations actually will be good for the M&A markets..."

2017 Preview: A number of factors that supported a healthy M&A market in 2016 should remain in place. Strategic companies have strong balance sheets with high cash balances, and private equity groups are successfully raising new funds. Interest rates are still relatively low, but we may have seen a bottom. As we noted, the Federal Reserve raised its discount rate in December, the second time it has done so since the end of the recession and a sign of a strengthening economy. Valuations appear to have backed off from their 2015 highs, but not by much and are still reasonably strong. The Enterprise Value / EBITDA average for the companies in the Grace Matthews Chemical Index is currently 10.4x, down from the high of 11.6x set in May 2015. We believe the combination of the prospect of higher interest rates and relatively high valuations actually will be good for the M&A markets, as buyers will want lock in lower rates while they can and sellers will attempt cash out while valuations are high.

For strategic companies, we expect to see a continuation of carve-out divestitures and synergistic acquisitions as they focus on building their core businesses and maintaining market share in increasingly competitive markets – a result of all the industry transformative deals of 2015 and 2016. The Dow/DuPont deal will close in 2017, to be followed by a split into three separate, publicly traded businesses focused on materials (i.e. basic chemicals), specialty chemicals, and agrochemicals. Though the split probably will not occur until 2018 or later, expect that M&A activity will pick up in the areas touched by these businesses. As we noted, consolidation in agrochemicals is already well underway, and the action in specialties doesn't really require a catalyst – those markets are perennially strong. In materials, the split off company will have core competencies in monomers, resins and certain high-volume plastics. The company will be a strong competitor to BASF, which bought and sold a number of businesses in 2016. Expect that BASF will remain active in 2017. BASF's management and board have signaled a willingness to undertake large transactions as well as normal course small- and medium sized acquisitions.

The Sherwin Williams / Valspar deal will also close in 2017, prompting increased interest in coatings. We're neutral on the prospect of another coatings "mega" deal in 2017 due to anti-trust considerations, and think that most of the action is going to be downstream in the middle market. All of the CASE (Coatings, Adhesives, Sealants and Elastomers) markets should be strong, and sellers of niche industrial coatings and adhesives manufacturers may expect healthy competition for their companies.

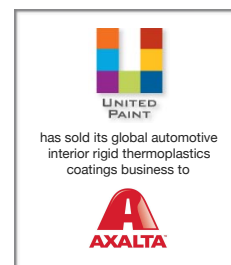
Private equity groups will continue to be active in chemicals. A number of groups have raised new funds in 2016, and will seek to place this cash in new platforms or "bolt-on" companies for their existing assets. At the same time, we are beginning to see a number of sales of chemical assets owned by private equity firms. Platinum Equity sold Mactac Europe (pressure sensitive adhesives) to Avery Dennison in April and Mactac Americas in October. Audax sold KODA Distribution at the close of 2015. It's possible that sales like these may represent the beginning a trend; a number of private equity-owned chemical companies acquired around 2009 – 2010 shortly after the recession ended are held in funds that must be liquidated according to their charter. Many of these companies, having grown in scale through "bolt-on" acquisitions, will either go public or make attractive targets for large strategic buyers.

Grace Matthews Case Studies

United Paint & Chemical Corporation

Founded in 1953, United Paint & Chemical Corporation ("United Paint") is a formulator and manufacturer of coatings for automotive interior applications. With approvals of its products by 25 of the world's leading vehicle manufacturers, United Paint's coating systems enhance the durability and aesthetic qualities of automotive instrument panels, consoles and other interior trim.

For estate and business planning purposes, the owners of United Paint decided to divest the assets of its rigid thermoplastics coatings business ("the Business") to a buyer that could leverage it across a global organization. The Business, with operations in North America and China, is a leading supplier of highly innovative coatings for automotive interior thermoplastic substrates. The Business had experienced significant growth over the last few years by continuing to gain share in a growing market. The owners believed a synergistic buyer with global manufacturing and distribution capabilities could support the Business's continuing growth, particularly in foreign markets where the Business has had limited presence.



Given that the potential transaction was a "carve-out" sale of assets and that the buyer would need to transfer operations into its existing facilities, Grace Matthews elected to focus on a select number of strategic buyers that could leverage the Business's robust product portfolio and strong customer relationships. Grace Matthews' deep relationships in the coatings industry was instrumental in establishing dialogue and properly positioning the Business with a group of best-fit buyers. After receiving multiple strong offers, United Paint elected to sell the Business to Axalta Coating Systems, a global company focused solely on providing coatings for automotive and industrial applications. The Business complemented Axalta's existing products for exterior automotive applications and allowed Axalta to move toward becoming a single source supplier of coatings for vehicle interiors and exterior surfaces. Production temporarily remained at United Paint's facility before transferring to Axalta's facilities in a phased manner. The transaction was structured as a purchase of assets and closed in July 2016.

Select 2016 Chemical Industry Transactions

Transaction values in \$US millions					
Announced	Acquirer / Target	Target Description	Transaction Value	TEV / Sales*	TEV / EBITDA*
Dec-16	Nippon Paint / Dunn Edwards	Architectural Coatings			
Dec-16	Evonik / Huber's silica business	Silicas for consumer goods applications	\$630.0	2.1x	10.5
Dec-16	Edgewater Capital / DanChem Technologies	Specialty chemicals process scale-up and contract manufacturing			
Dec-16	Edgewater Capital (Far Chemical) / Mackenzie Chemical's acetylacetonates product line	Acetylacetonates utilized as catalysts, cross linkers, curing agents and stabilizers			
Dec-16	Lonza / Capsugel	Drug capsules and drug delivery systems	\$5,500.0	5.0x	15.1x
Dec-16	Blackstone/Solvay's Acetow business	Materials for cigarette filters	\$1,070.0	1.8x	7.0x
Nov-16	Edgewater Capital / BASF's inorganic specialties business	Specialty alcoholates, boranes, and alkali metals			
Oct-16	American Securities / Chromaflo Technologies	Global supplier of colorant systems, chemical and pigment dispersions			
Oct-16	Lintec Corp / Mactac America	Pressure-sensitive adhesives and related products	\$375.0		
Oct-16	Ferro / Cappelle Pigments (Belgium)	High performance organic and inorganic pigments	\$56.0		
Oct-16	Brenntag / NOCO's lubricants business	Lubricants distribution	\$37.0		
Oct-16	Chase Corporation / Resin Designs	Custom adhesives and fabricated silicones	\$30.0	2.8x	
Oct-16	H.I.G. Capital / Dominion Colour Corporation (Canada)	Inorganic and organic color pigments, pigment preparations, and dispersions			
Sep-16	Lanxess / Chemtura	Specialty chemicals	\$2,468.0	1.5x	8.3x

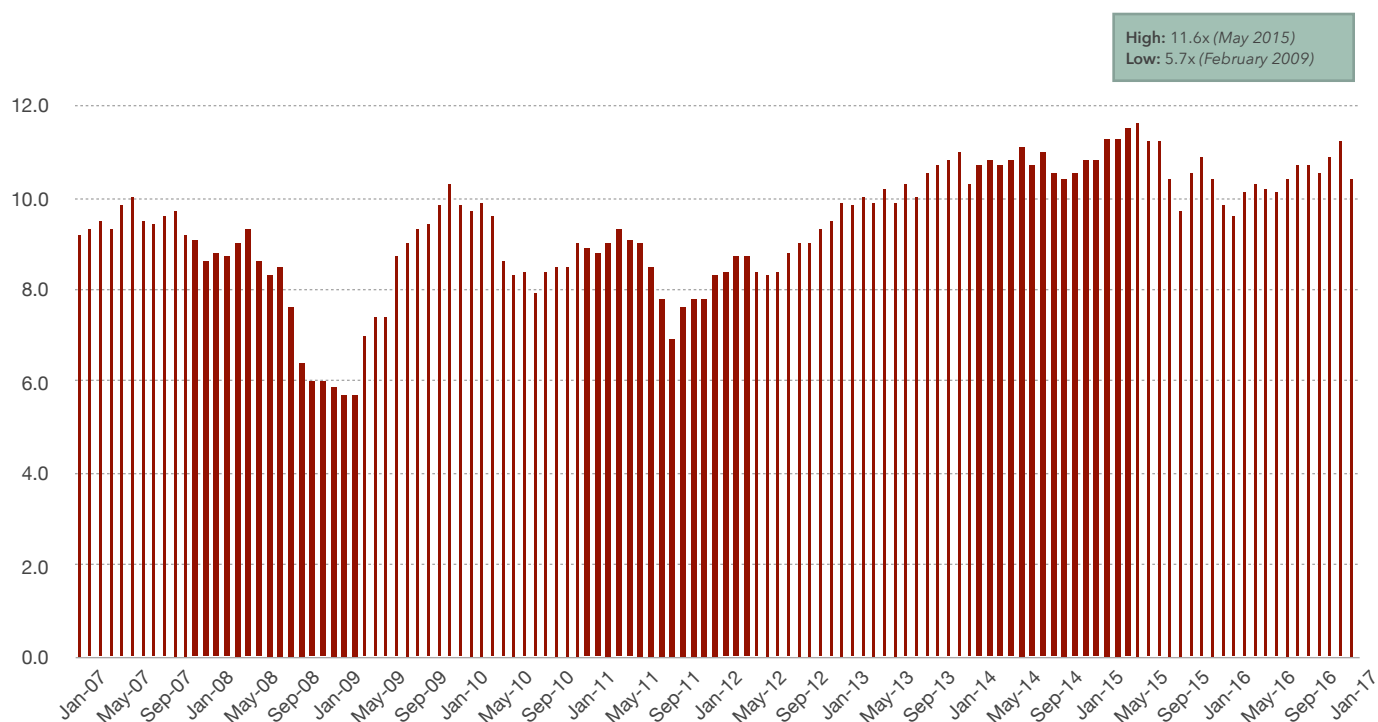
Transaction values in \$US millions					
Announced	Acquirer / Target	Target Description	Transaction Value	TEV / Sales*	TEV / EBITDA*
Sep-16	American Securities / The Henry Company	Protective roof and barrier coatings for buildings, waterproofing, sealants and related products			
Sep-16	Arsenal Capital (Polymer Solutions Group / Alkon Solutions (UK)	Anti tack release agents			
Sep-16	Clariant / Kel-Tech	Oilfield chemicals			
Sep-16	Clariant / X-Chem	Oilfield chemicals			
Sep-16	Potash Corp / Agrium (Canada)	Merger: crop nutrients, protection products, and seeds	\$18,328.0	1.3x	9.7x
Sep-16	RPM (Carboline Company) / Specialty Polymer Coatings	Specialty coatings for industrial pipelines			
Sep-16	SI Group / TPC Group's Baytown propylene derivatives business	Propylene derivatives			
Aug-16	Avantor Performance Materials / NuSil Technology	Gels, liquid silicone rubbers, inks, elastomers, colorants and related products			
Aug-16	Azelis / Ametech (Italy)	Agrochemical and fertilizers distribution			
Aug-16	Innospec / Huntsman's European surfactants business	Personal care and home care business, including organic and inorganic chemical products	\$225.0	1.0x	9.4x
Aug-16	Wind Point Partners and Ontario Teachers' Pension Plan / Aurora Plastics, Inc.	Custom blended PVC resins and powder compounds			
Aug-16	Veolia / Chemours' sulfur products business	Sulfur products business	\$325.0	1.2x	
Jul-16	PolyOne / Gordon Holdings	Thermoset composite laminates	\$86.0		
Jul-16	Axalta Coating Systems / United Paint's automotive interior rigid thermoplastics coatings	Rigid thermoplastic coatings for automotive applications			
Jul-16	Royal Adhesives and Sealants / Bacon Adhesives	Adhesives for aerospace, defense, and electronics applications			
Jul-16	WR Grace / BASF's polyolefin catalyst business	Polypropylene and polyethylene catalysts			
Jun-16	BASF / Chemetall	Surface treatment solutions, corrosion protection, lubricants, metalworking fluids, metal treatment	\$3,200.0	3.8x	15.8x
Jun-16	Olympus Partners / Ennis Flint	Traffic pavement markings and safety solutions			
Jun-16	Westlake Chemical / Axiall	Chlor-alkali and derivative products	\$3,623.0	1.1x	11.1x
Jun-16	PPG / MetoKote	Custom coating services, including electro coating, powder coating, liquid painting, and metal finishing			
Jun-16	H.B. Fuller / Cyberbond	Industrial and engineering adhesives			
Jun-16	Italmatch Chemicals / Compass Chemical	Specialty chemicals for water treatment, oilfield production, and industrial cleaning applications			
May-16	Bayer / Monsanto	Agricultural products, including seeds, herbicides, and other agricultural chemicals	\$63,488.0	4.7x	17.0x
May-16	Flint Group / American Inks & Coatings Company	Inks and coatings			
May-16	Polynt Group / Reichhold Group	Polyester resins, coating resins, intermediates, and composites (Italy)	\$700.0		
May-16	Evonik / Air Products' Performance Materials Division	Semi-conductor materials, epoxy curing agents, polyurethane additives	\$3,800.0	3.7x	15.8x
May-16	Maroon Group / U.S. Chemicals	Specialty chemicals distribution			
Apr-16	Avery Dennison / Mactac Europe	Pressure sensitive adhesive materials	\$231.3	1.4x	
Apr-16	Lanxess / Chemours' disinfectants business	Cleaning and disinfectant chemicals	\$236.0	2.4x	11.8x
Apr-16	Arsenal Capital (Elite Comfort Solutions) / Peterson Chemical Technology	Foam additives and specialty polyols systems for memory foam applications			
Apr-16	Arsenal Capital (Polymer Solutions Group) / Sasco Chemical	Rubber products, disinfectants, degreasers, specialty cleaners, lubricants, water treatment			
Apr-16	Huron Capital (Valentus Specialty Chemicals) / Precision Technology's floor finishes business	Floor finishes, including acid-cure floor coating system			

Transaction values in \$US millions

Announced	Acquirer / Target	Target Description	Transaction Value	TEV / Sales*	TEV / EBITDA*
Apr-16	Audax (ICP) / Fomo Products	Polyurethane foam sealant and adhesive products			
Mar-16	WL Ross Holding / Nexeo Solutions	Chemicals and plastics distribution	\$1,550.0	0.4x	10.2x
Mar-16	Synthomer / Hexion's performance adhesives & coatings business	Dispersions, additives, powder coatings, specialty monomers	\$226.0	0.6x	7.5x
Mar-16	Sherwin Williams / Valspar	Paints and coatings	\$11,279.0	2.6x	16.2x
Mar-16	Americhem / Vi-Chem	Thermoplastic elastomers, PVC, and PVC-based polymer alloy compounds			
Mar-16	Arsenal Capital / Pacific Urethanes	Polyurethane foams			
Mar-16	Arsenal Capital / HSM Foam	Polyurethane foams			
Mar-16	Arsenal Capital / Elite Foam	Polyurethane foams			
Mar-16	Arsenal Capital (Accella) / Quadrant Urethane Technologies spray foams division	Urethane spray foams for insulation market			
Mar-16	Dorf Ketal / Flowchem Technologies	Chemicals and services for oil and gas applications			
Mar-16	RPM (Rustoleum) / Seal-Krete	Concrete care coatings and sealants			
Mar-16	Univar / Bodine Services	Waste management and environmental services chemicals			
Feb-16	Audax (ICP) / 3M's pressurized polyurethane foam business	Pressurized polyurethane			
Feb-16	KIK Custom Products / Prestone Products Corporation	Antifreeze/coolants, brake and power steering fluids, and other vehicle maintenance products	\$230.0		
Feb-16	H.B. Fuller / Advanced Adhesives (Australia)	Industrial adhesives for consumer, woodworking, and assembly applications (Australia)			
Feb-16	AkzoNobel / BASF's industrial coatings business	Industrial coatings	\$529.0	1.6x	
Feb-16	ChemChina / Syngenta (Switzerland)	Global pesticides and seeds company	\$44,826.0	3.4x	16.4x
Feb-16	PolyOne / Kraton Performance Polymers TPE business	Compounds for personal care, protective film, consumer, medical and automotive applications	\$72.0		9.0x
Feb-16	Royal Adhesives and Sealants / Associated Technologies Weld Mount Systems business	Adhesive-bonded fasteners			
Feb-16	Arsenal (Polymer Solutions Group) / Flow Technologies	Custom dispersions and homogenizing agents for tire, automotive, industrial markets			
Jan-16	Maroon Group / CNX Distribution	Specialty chemical distribution			
Jan-16	Precision Coating Company / Boyd Coatings Research	Coatings for medical device, industrial, and aerospace markets			

* TEV = Total Enterprise Value (equity value, plus funded debt, minority interests and preferred shares; less cash and cash equivalents)

Grace Matthews Chemical Index: Enterprise Value / EBITDA



Source: Grace Matthews & Capital IQ

The Grace Matthews Index tracks the Enterprise Value / EBITDA ratios ("EV/EBITDA multiples" or just "EBITDA multiples") of 98 publicly-traded chemical companies that span multiple markets and geographies. The index aggregates the latest reported financial data and stock prices, and tracks valuation trends and operating metrics across different industry sectors. The Index averages are equally weighted, as opposed to weighting by market capitalization, in order to avoid having the valuations and financial performance of the largest companies determine index values.

Grace Matthews Index: Current Values

	Total Enterprise Value / Revenues	Total Enterprise Value / EBITDA	Gross Margin % Sales	EBITDA % Sales	1 Year Revenue Growth %	1 Year EBITDA Growth %
Mean	2.2x	10.4x	31.3%	16.7%	0.8%	4.6%
Median	2.0x	10.0x	29.1%	15.8%	0.1%	2.2%
High	8.2x	25.7x	65.4%	40.5%	90.3%	173.2%
Low	N/A	5.3x	7.3%	5.3%	N/A	N/A

Grace Matthews: Select Chemicals and Materials Transactions

 <p>has been acquired by</p>  <p>AMERICAN SECURITIES</p>	 <p>has sold its Baytown Operations to</p>  <p>The Substance Inside</p>	 <p>has sold its global automotive interior rigid thermoplastics coatings business to</p> 	 <p>a division of</p>  <p>has been acquired by</p> 
 <p>has been acquired by</p>  <p>OLYMPUS PARTNERS</p>	 <p>The Chemical Company</p> <p>has sold its global Polyolefin Catalysts business to</p> 	 <p>americhem®</p> <p>has acquired</p> 	 <p>has sold its pressurized polyurethane foam adhesives business to</p> 
<p>DELOSCAPITAL</p> <p>sold its portfolio company</p>  <p>to</p> 	 <p>CHEMQUEST CHEMICALS</p> <p>has been acquired by</p> 	<p>TAYLOR</p> <p>Innovative Science. Applied Technology.™</p> <p>has been acquired by</p> 	 <p>has been acquired by</p> 
 <p>has been acquired by</p> 	 <p>GABRIEL PERFORMANCE PRODUCTS</p> <p>has acquired select assets of the Capcure business from</p>  <p>The Chemical Company</p>	 <p>Compass</p> <p>Chemical International</p> <p>has been acquired by</p> 	<p>PCHEM</p> <p>has been acquired by</p> 
 <p>has sold certain assets to</p> 	<p>SYRGIS®</p> <p>has been acquired by</p>  <p>UNITED INITIATORS</p> <p>driving your success</p>	 <p>has sold its portfolio company</p>  <p>ColorMatrix</p> <p>to</p> 	<p>LORD</p> <p>has sold its Resilient Floor Coatings Business to</p> 

Grace Matthews Clients Listed First

Grace Matthews Overview

Grace Matthews is recognized globally as a leader in transaction advisory services for manufacturers and distributors throughout the chemical value chain. Grace Matthews' clients include privately held businesses, private equity funds, and large, multinational corporations.

Grace Matthews' practice is global in scope, and focuses on several areas: sell-side transactions for private companies, private equity holdings, and divestitures for multi-national corporations; buy-side work, typically for large, public companies or major multi-nationals and sponsor-backed chemical platforms; leveraged transactions involving raising debt and/or equity capital, strategic advisory analysis, and transaction fairness opinions. Areas of expertise include:

- Adhesives, Sealants, Tapes
- Catalysts, Petrochemicals
- Chemical Intermediates
- Construction Chemicals, Building Products
- Distribution, Equipment, Infrastructure
- Food Ingredients, Flavors, Fragrances
- High Purity, Electronic, Custom Synthesis
- Industrial Minerals, Inorganic Chemicals
- Oilfield & Water Treatment Chemicals
- Paints, Coatings, Inks
- Personal Care, Soaps, Medical Materials
- Plastics, Colorants, Additives
- Tolling, Private Label Products
- Additional Chemical Sectors, Other Industries

Grace Matthews is a privately held investment bank with successful chemical industry transactions dating back to the early 1990s. Grace Matthews principals have completed over 100 transactions involving global corporations such as AkzoNobel, 3M, Lubrizol, BASF, DuPont, Sherwin-Williams, PPG Industries, Ashland, Ceradyne, DSM, ICI, Borregaard, Air Products, Landec Corporation, The Home Depot, Hexion Specialty Chemicals, ITW, PolyOne, Weatherford, and Evonik, to name a few.

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