

# CHEMICAL INSIGHTS



## Adhesives and Sealants: Still Evolving

A little over 20 years ago, when a number of Grace Matthews professionals were just beginning careers in chemical mergers & acquisitions, one of the areas we singled out for concentration was adhesives and sealants. We believed that adhesives and sealants manufacturing was widely perceived as a maturing, slow-growth industry that was overlooked by many M&A professionals that at the time were captivated by the emerging technological frontier of the early 1990s – cell phones, the internet, bio-technology, etc. Adhesives, we thought, was fertile ground for deal-making because of a number of factors – good growth prospects, an active pool of acquirers, and a large number of potential sellers. We thought growth would outpace GDP because adhesives were increasingly supplanting mechanical fasteners to join different materials. The industry's structure as well seemed ripe for consolidation, with a limited number of mostly public, multi-national firms – H.B. Fuller, 3M, Henkel and the like – and a considerable number of private small- and medium-sized firms that formed a pool of attractive acquisition candidates. In this respect, the adhesives and sealants industry appeared to resemble the architectural coatings industry – another area of interest for us -- with its major players (Sherwin-Williams, PPG, AkzoNobel, Valspar, Benjamin Moore, etc.) and large number of regional firms with established brands in their respective territories. For both industries, we believed we had perhaps 10-20 years for an active M&A market, before the majors grew so large through acquisitions that few quality companies would be left to acquire.

To an extent, we were right about consolidation in the architectural coatings industry, so much so that Andy Hinz, a Grace Matthews Director, wrote a paper about it, which noted that today four firms account for an estimated 84% of all architectural coatings sold in North America<sup>1</sup>. But we were wrong about the adhesives industry. Not about the growth drivers and consolidation trend, both of which are still going strong, but in our belief that most of the quality independent players would be inevitably swallowed up by the major public companies. It's true that the larger firms have been actively expanding their market footprint through acquisitions, such that the top ten or so companies probably now control almost half of the global market. However, the sheer number of applications and the fact that particular adhesive technologies often don't transfer easily from one application to another ensures that there are continuing opportunities for smaller and mid-sized companies to differentiate themselves in the marketplace.

## Expanding Applications Creates Opportunity

It now seems that the market's continuing fragmentation in the lower and middle market range is a permanent structural feature of the industry, mostly because of the extraordinary diversity of the end markets, which encompass everything from

<sup>1</sup> *North American Architectural Coatings: The End Game?* (Email [mtveten@gracematthews.com](mailto:mtveten@gracematthews.com) for a copy)

general purpose household glues on the low end to structural aerospace adhesives on the high end. The trend to replace mechanical fasteners with lower cost, and often higher performance, adhesive solutions is still in place, but most adhesive manufacturers recognize that the industry has gone far beyond that. Adhesives and sealants today are engineered not just to join together substrates or act as moisture barriers, but to perform a number of other important functions - act as structural gap fillers, absorb vibrations or sounds, or insulate electrical components, to cite just a few examples. As a result, manufacturers have discovered that specialization pays, and that focusing on innovation and offering best-in-class products for a particular application is one way to create a defensible position in the marketplace.

An excellent example is Edge Adhesives, a technology-driven manufacturer of waterproofing tapes, sealants and gaskets for the construction, transportation, and other industrial markets. Historically, many adhesive and sealant products sold into Edge's markets utilized asphalt as a binding material, which had the advantage of low cost over other technologies. Edge foresaw that regulatory and raw material pricing trends ultimately would erode asphalt's cost advantage, and it was an early innovator in formulating better performing and more environmentally-friendly butyl rubber and block-copolymer compounds for construction applications. As the cost of asphalt materials climbed in the 2000s, Edge was able to take market share from manufacturers of asphalt-based products and rapidly grow in its key construction markets. As a result, it became an attractive acquisition target, and recently was acquired by Gladstone Investment Corporation in partnership with Akoya Capital Partners, LLC.

### Economic Backdrop Provides Near Perfect Conditions for Adhesives M&A

Revenues for the global adhesive and sealants industry are estimated to be about \$45 - \$48 billion annually, with the North American market valued at about \$12 - \$14 billion. Various growth estimates indicate the industry has been growing faster than GDP, at around 3.0% - 3.5% since the recovery began in 2009, as opposed to about 2.5% for the domestic economy as a whole. The general economic recovery has been a factor, but as we have described, an ever multiplying number of applications practically ensures above average growth. Our view is that several key markets for adhesives, construction and automobiles in particular, are still in the early phases of recovery, and usage of adhesives in some areas is actually accelerating. Automobile manufacturers, for example, are under pressure to reduce vehicle weight in order to meet higher mileage and CO<sub>2</sub> emission standards, and using greater amounts of structural adhesives in a vehicle is one way to achieve these goals.

It's not just industry revenues and volumes that are growing. Industry margins also are widening, buoyed by lower material costs, particularly for petrochemicals feedstocks derived from the North American shale oil and gas production. Even with the declining prices for crude oil over the past year, new capacity for ethylene and other petrochemicals are coming online to absorb the new production and are exerting downward pressure on prices. Adhesives and sealants manufacturers, as well as other specialty chemicals firms positioned "downstream" from these commodity petrochemical suppliers, are benefiting from the price competition higher up the production chain.

Considering the industry's healthy growth prospects and attractive margins in the context of other macro-economic conditions - access to low-cost credit, strong corporate balance sheets, and record levels of cash for private equity - it's not surprising the M&A market for adhesive and sealant companies has been fairly strong. Several large strategic buyers have been using acquisitions as a critical part of their growth strategy for expanding into new markets. Sika, Henkel, H.B. Fuller and Royal Adhesives & Sealants have been especially active, each having made multiple acquisitions over the past few years. Private equity firms also have been putting their capital to work. In what will likely be one of the largest transactions this year, American Securities in June completed its acquisition of Royal Adhesives & Sealants (estimated revenues >\$600 million) from Arsenal Capital Partners. Another notable transaction is Dominus Capital's recapitalization of W.F. Taylor Co., a manufacturer and marketer of green flooring adhesives.



Although demand has been strong, it hasn't been matched by supply, and as a result valuations have been rising. Buyers are willing to pay premium values for companies that have innovative technologies or that can provide access to high growth markets. However, "premium value" is a relative term; for strategic buyers that have significant manufacturing and commercial synergies with the target company, the buyer's "internal" multiple with synergies added may be much lower than the published number. This may explain why certain strategic transactions only appear to have high values. To cite just two examples within the past year, H.B. Fuller acquired Tonsan Adhesives (China; engineering/automotive adhesives)

for an “apparent” value of 12.2x EBITDA, and Henkel purchased Berquist (thermal management materials and adhesives) for an apparent value of 3.2x sales.

2015 is shaping up to be a banner year for adhesives and sealants M&A: just through the end of June, we have counted over 20 significant transactions. As long as the favorable economic fundamentals remain in place – inexpensive credit, relatively high valuations, and a pool of competitive buyers – we expect that nearly ideal market conditions will persist for sellers bringing companies to market.

## Recent M&A Transactions: Adhesives & Sealants

*Transaction values in \$US millions*

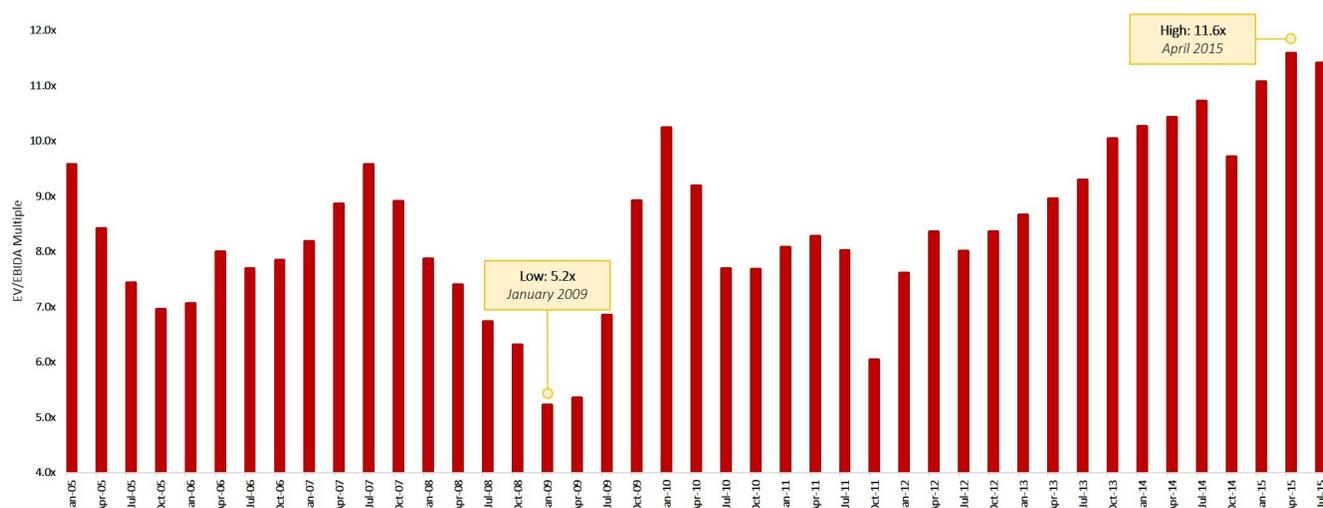
Date	Acquirer / Target	Target Description	Transaction Value	TEV / Sales*	TEV / EBITDA*
Pending	Sika / Construction Technologies Australia	Adhesives, grouts, and waterproofing membranes (Australia)	NA	NA	NA
Pending	Henkel / Novamelt	Hot melt adhesives	NA	NA	NA
Pending	BASF / Taiwan Sheen Soon	TPUs for solvent-based adhesives (Taiwan, China)	NA	NA	NA
Pending	Sika / BMI Products	Mortar products and systems	NA	NA	NA
Pending	PPG / Le Joint Français' (LJF) aerospace and automotive sealants business	Sealants	NA	NA	NA
Pending	Sika / Duro Moza Sociedade Unipessoal	Mortars, tile adhesives, plasters, dry shakes (Mozambique)	NA	NA	NA
Jul-15	RPM   Tremco / Chemtron Manufacturing	Construction adhesives, sealants, tapes	NA	NA	NA
Jun-15	American Securities / Royal Adhesives & Sealants	Diversified adhesives/sealants	NA	NA	NA
Jun-15	KMG Chemicals / Valve Inc. of Texas	Valve lubricants and sealants	\$39	3.2x	11.4x
May-15	Dominus Capital / W.F. Taylor	Flooring adhesives	NA	NA	NA
May-15	Nekoosa Holdings / Main Tape	Graphics transfer tape and surface protection solutions	NA	NA	NA
Apr-15	Royal Adhesives & Sealants / Chemical Innovations Limited	Rubber to metal adhesives (UK)	NA	NA	NA
Apr-15	PPG / REVOCOAT	Automotive sealants and adhesives (France)	NA	NA	NA
Mar-15	Sika / Axson Technologies	Polyurethane and epoxy resins (France)	NA	NA	NA
Mar-15	Fenzi Group / Kadmar	Sealants for insulating glass (Poland)	NA	NA	NA
Mar-15	Hempel / Jones-Blair	Waterproofing, epoxy flooring, elastomeric roofing, wall coating	NA	NA	NA
Feb-15	H.B. Fuller / Continental Products	Industrial and construction adhesives (Africa)	NA	NA	NA
Feb-15	Arkema / Bostik	Diversified adhesives/sealants	\$1,953	1.1x	11.0x
Feb-15	H.B. Fuller / Tonsan Adhesives	Engineering adhesives (China)	\$243	2.4x	12.2x
Feb-15	Chase Corporation / Henkel's microspheres and polyurethane business	Microspheres and polyurethane dispersion intermediates	\$33	1.7x	NA
Jan-15	Royal Adhesives & Sealants / Advanced Polymers International	Microsphere based adhesives	NA	NA	NA
Nov-14	Platinum Equity / Bemis' MACtac business	Pressure sensitive materials	\$170	NA	NA
Oct-14	Soudal / Zaklady Chemiczne BOCHEM	Consumer and industrial adhesives (Poland)	NA	NA	NA

*Transaction values in \$US millions*

Date	Acquirer / Target	Target Description	Transaction Value	TEV / Sales*	TEV / EBITDA*
Oct-14	Trecora Resources / SSI Chusei	Polyethylene waxes	\$73	3.2x	11.1x
Sep-14	Henkel / Bergquist	Thermal management materials and adhesives	\$570	3.2x	NA
Sep-14	Royal Adhesives & Sealants / Chemque	Adhesives and equipment	NA	NA	NA
Sep-14	H.B. Fuller / ProSpec Construction Products	Tile and stone installation products	\$35	NA	NA
Jul-14	Ellsworth Adhesives / Wolcott-Park	Industrial adhesives and dispensing equipment	NA	NA	NA
Jun-14	Soudal / Accumetric	Sealants and lubricants	\$21	NA	NA
May-14	Mapei / General Resource Technology	Chemical admixtures and fiber reinforcement systems	NA	NA	NA
May-14	Sika / LWART Química	Waterproofing products (Brazil)	NA	NA	NA
Apr-14	Harper   Love Adhesive Corporation / Graycliff Partners	Adhesives	NA	NA	NA
Feb-14	The Gladstone Companies   Akoya Capital / Edge Adhesives	Adhesives, sealants, tapes	NA	NA	NA
Jan-14	Sika / LCS OPTIROC	Dry-mortar construction products (Singapore)	NA	NA	NA
Jan-14	Sika / DYFLEX	Urethane waterproofing materials (Japan)	NA	NA	NA
Jan-14	LATICRETE / L&M Construction Chemicals	Cleaners, concrete dyes and stains, curing and sealing compounds	NA	NA	NA
Dec-13	Henkel / OOO Khenkel Bautechnik	Adhesives, sealants, and paints (Russia)	\$89	NA	NA
Oct-13	Sika / AkzoNobel's building adhesives	Construction adhesives	\$348	1.4x	NA
Jul-13	Royal Adhesives & Sealants / ADCO Global	Adhesives and sealants	\$405	NA	9.0x
Jul-13	Sika / Jmtexsa	Roofing waterproofing membranes (Mexico)	NA	NA	NA
Jun-13	Sika / Everbuild Building Products	Adhesives, sealants, and building chemical products (UK)	\$91	NA	NA
Jun-13	H.B. Fuller / Plexbond Química	Solventless and solvent based adhesives (Brazil)	\$11	NA	NA
Apr-13	PPG / AkzoNobel's North American architectural coatings	Architectural coatings and adhesives	\$1,050	0.7x	10.9x
Mar-13	Mapei / Wallmerk Construction	Adhesives and sealants for the building industry (Turkey)	NA	NA	NA
Mar-13	Scott Bader / ATC Formulated Polymers	Polyester and vinylester compounds for composites (Canada)	NA	NA	NA
Feb-13	Ellsworth Adhesives / Adhesive Methods and Technology	Industrial adhesives and dispensing equipment	NA	NA	NA
Jan-13	Sika / Inatec	Refurbishment, waterproofing and concrete admixtures (Paraguay)	NA	NA	NA

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

## Grace Matthews Adhesive and Sealant Index



Source: Grace Matthews

The Grace Matthews Adhesives and Sealants Index tracks valuation and performance metrics for 13 publicly traded chemical companies that have a substantial presence in the adhesives and sealants markets. The Enterprise Value/EBITDA averages presented in the index are simple, equal weighted averages, which avoids having larger companies dominate the index, as would be the case if the index contributions were weighted by market capitalization.

Be advised that with the exception of H.B. Fuller, none of the companies in the index come close to being a "pure play" adhesives and sealants company, and most are involved in multiple areas of specialty chemicals. That said, we believe the index metrics and averages are a fairly good proxy for the industry's performance over time.

Name	Total Enterprise Value (\$ millions)	LTM EBITDA (\$ millions)	EBITDA Margin %	EBITDA 5 Yr CAGR %	Total Enterprise Value / EBITDA
3M Company	\$102,191	\$8,546	27.1%	4.77%	12.0x
Arkema S.A.	\$7,271	\$880	12.6%	15.73%	8.3x
Ashland Inc.	\$10,449	\$758	12.9%	(2.31%)	13.8x
Avery Dennison Corporation	\$6,586	\$668	10.6%	1.01%	9.9x
BASF SE	\$94,993	\$11,000	13.3%	2.97%	8.6x
H.B. Fuller Co.	\$2,715	\$214	10.3%	4.85%	12.7x
Henkel AG & Co. KGaA	\$43,498	\$3,330	17.8%	10.28%	13.1x
Huntsman Corporation	\$9,778	\$1,214	10.6%	15.76%	8.1x
Illinois Tool Works Inc.	\$39,124	\$3,413	23.9%	7.22%	11.5x
PPG Industries, Inc.	\$34,839	\$2,358	15.3%	9.76%	14.8x
RPM International Inc.	\$8,087	\$566	12.6%	5.97%	14.3x
Sika AG	\$9,129	\$829	14.1%	7.71%	11.0x
The Dow Chemical Company	\$77,237	\$8,435	15.0%	10.39%	9.2x
<b>Mean Value</b>			<b>15.1%</b>	<b>7.2%</b>	<b>11.3x</b>
<b>Median Value</b>			<b>13.3%</b>	<b>7.2%</b>	<b>11.5x</b>

**Grace Matthews Chemicals and Materials Practice: Select Transactions**

 <p>has been acquired by</p> 	 <p>has been acquired by</p> 	 <p>has been acquired by</p> 	 <p>has been acquired by</p> 
 <p>has acquired select assets of the Capture business from</p> 	 <p>has sold certain assets to</p> 	 <p>has been acquired by</p> 	 <p>has acquired the assets of</p> 
 <p>has sold its Resilient Floor Coatings Business to</p> 	 <p>has been acquired by</p> 	 <p>has sold its portfolio company</p>  <p>to</p> 	 <p>has acquired</p>  <p>from</p> 
 <p>has acquired</p> 	<p>Beckers Becker Industrial Coatings</p> <p>has acquired the stock of</p> 	 <p>has acquired</p> 	 <p>has acquired</p> 
 <p>has acquired</p> 	 <p>has sold its specialty chemical subsidiary</p>  <p>to</p> 	 <p>has licensed exclusive fields of Intelimer technology from</p> 	 <p>has acquired</p> 

## Grace Matthews Chemicals and Materials Overview

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Grace Matthews' chemical group is recognized globally as a leader in transaction advisory services for manufacturers and distributors of specialty, commodity, and formulated chemicals. 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:

- Paints, Industrial Coatings, Inks
- Adhesives, Sealants, Tapes
- Plastics, Polymers, Resins
- Colorants, Additives
- Construction Materials
- Contract Packaging
- Biomaterials
- Agricultural Chemicals
- Inorganics, Ceramics, Catalysts
- Personal Care, Soaps, Cleaners
- Fine Chemicals
- Water Treatment Chemicals
- Oil & Gas Process Chemicals
- Industrial Minerals

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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