

# **GLOBAL ADHESIVES AND SEALANTS STATE OF THE UNION**

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*President and CEO*

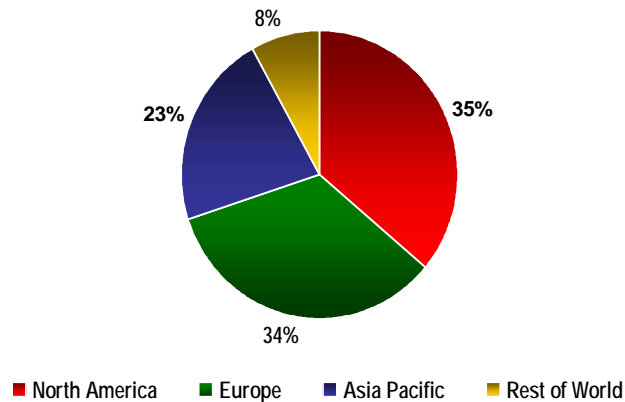
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*Adhesives and Sealants Industry (ASI) –*  
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The global adhesives and sealants industry reached a record \$36 billion USD in 2006 with nearly 4% growth over 2005 and forecast to grow at 3.8% through 2008. Not too surprisingly, the greatest advancements occurred in Asia fueled by emerging markets in China, India, Vietnam, Korea and Malaysia. Asia, which represents nearly a quarter of global consumption, is growing two to two and half times faster than developed regions.



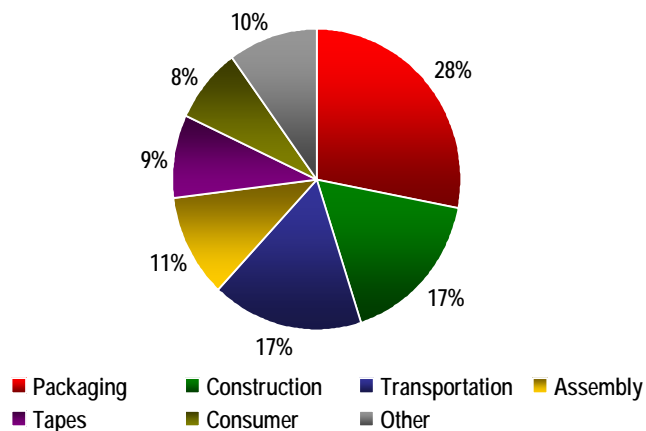
Packaging remains the largest market sector with 28% share, but the moniker for fastest growing market sectors belongs to the construction and pressure sensitive tapes sectors.

Construction grew globally at a 4.7% rate fueled by major global construction projects, none more evident than in China's unquenchable infrastructure expansion and preparation for the upcoming world stage events of the world games and the 2008 Olympics. India is also making its mark. The government in India is investing heavily in infrastructure projects to attract foreign investment. While still in the shadows of China, India will not remain there long recording a solid 9.2% GDP growth, one of the fastest in the region and globally.

Pressure sensitive tapes grew at 5.1% globally. Replacement of mechanical fasteners and liquid adhesives are major drivers fueling PSA growth as user-friendly application alternatives. Energy prices are putting a lot of pressure on fuel efficiency and financial performance within certain sectors such as transportation, thus driving design changes to incorporate lighter weight alloys and composites making it attractive to use adhesives and specifically



PSAs to fasten dissimilar materials. Medical and electronic applications, while relatively smaller contributed significantly to PSA tape growth as well.



Three resin families comprised of Acrylic, Polyurethane and Silicones/hybrids were the greatest benefactors reflecting growth greater than 5% per annum.

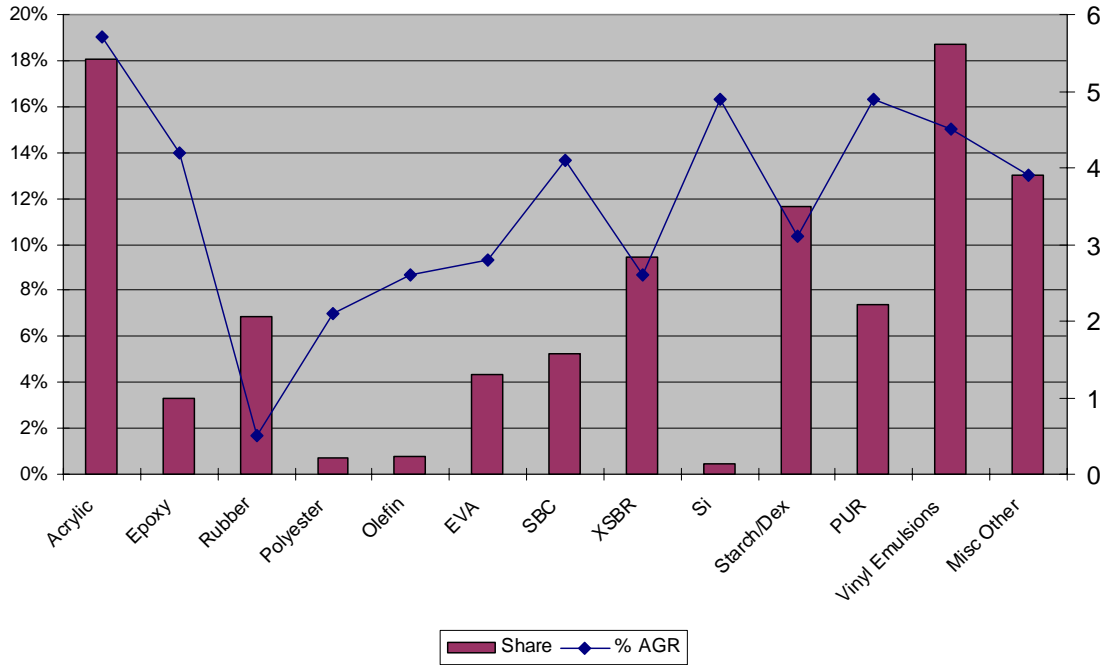
Not too surprisingly these resins families, supplied both in liquid and PSA tape forms, benefited primarily from expansion in construction spending, transportation and medical applications. Perhaps the greatest noticeable growth has been in the moisture cure hot melts, which are used for a number of assembly applications from engineered lumber to furniture assembly to automotive and manufactured housing.

Epoxy and styrene block copolymers (SBC) follow closely with greater than 4% growth. Epoxy growth is fueled by the resurgence of the consumer electronic sector and the increased use of structural adhesive applications for light weight composites, e.g. the transportation sector evidenced by Boeing's 787 Dream Liner and the Airbus A-380. SBC growth comes as a result of faster growth of hot melt adhesives due to their distinct advantages for improved operational efficiencies.

While still negligible, the industry advanced the use of synthetic polymers from renewable bio-based materials. Faced with record



energy prices, end users were eager to evaluate new technology to mitigate their dwindling margins.



The industry is bullish on 2007 even with a slow down in construction spending in North America and Europe due to higher interest rates. First quarter performance showed moderate revenue growth but significant improvement in margins as a result of slightly lower raw material prices relative to first quarter 2006.

In closing, few industries are as stalwart and vibrant as the global adhesive and sealant industry. It will continue to be a good portfolio investment for the foreseeable future.



## **About The Author**



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Dan joined The ChemQuest Group, Inc. in 1996 from the Rohm & Haas Company where he was most recently European Director, Industrial Coatings. Prior to R&H, he spent thirteen years with Unocal Polymers where his career took him from technical service positions to Director of Marketing. He directed the sale of the Unocal Polymers Business to Rohm & Haas, working closely with Morgan Stanley, numerous attorneys, as well as the FTC. His entire career has been dedicated to the Coatings and Adhesives Industries. His particular strengths lie in strategic assessment and value creation on behalf of clients. He holds degrees from Wabash College (BS Chemistry) and William & Mary (MBA).

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