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**NEW** US industry forecasts for 2019 & 2024

# Medical & Dental Adhesives & Sealants

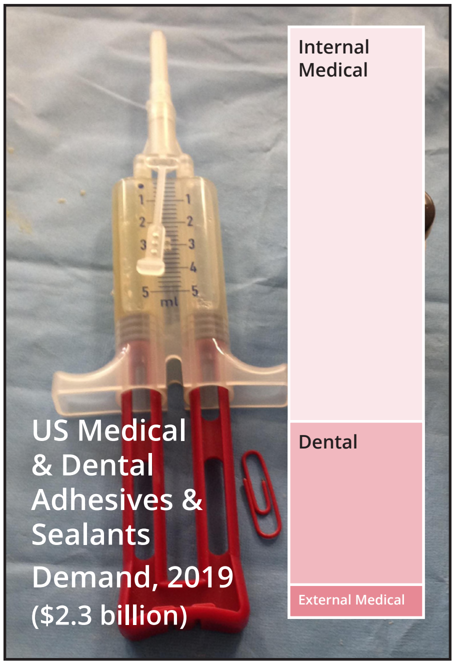
Study # 3390 | March 2016 | $5200

## US demand to rise 5.1% annually through 2019

US demand for medical and dental adhesives and sealants is expected to grow 5.1 percent annually to $2.1 billion in 2019. Expansion of the market will be fostered by rising health expenditures and rising focus on improving medical and dental procedure outcomes. Advances in life expectancy and the rapid growth in population segments aged 55 and above will lead to increasing incidences of acute illness, a greater prevalence of chronic diseases and disorders, and an increasing volume of patient activity that will drive demand for adhesives and sealants. Technical advancements in biotechnology further allow for sealants that act in conjunction with standard wound closures to reduce fluid and air leaks during and after surgery. This reduces recovery time and readmission rates, which have become key healthcare issues.

## Acrylic polymers to remain most widely used types

Acrylic polymers will remain the most widely used medical and dental adhesives, representing almost 30 percent of demand in 2019. Acrylic will retain its status as the leading polymer for dental and orthopedic applications due to its relative low cost, durability, and formulation versatility. Acrylic sealants play a major role in the federal government's agenda to promote oral health, aligning with a stated objective to increase the percentage of children and adolescents receiving dental sealants on their permanent molars. After acrylic, the most prevalent adhesives and sealants are based on polymers loaded with high levels of natural fillers such as glass and cellulose, which are widely used in dental adhesives and bone cements. Medical adhesives based on cyanoacrylate will continue to penetrate both internal and external medical applications based on the commercialization of new grades with improved biocompatibility and flexibility.




## Pulmonary applications to be fastest growing medical uses

Cardiovascular and bone applications are expected to lead demand in the medical segment through 2019, accounting for more than 50 percent of all use. However, adhesive and sealant demand in pulmonary applications is forecast to grow at the fastest rate of all medical and dental applications. This growth will be driven by the recent regulatory approval of a product specifically for use in lung surgery as well as the continued adoption of protein-based hemostats in pulmonary surgery. While the incidence of lung cancer is falling, chronic obstructive lung disease (COPD) remains the third leading cause of death in the US, behind cancer and heart disease. Looking forward, European hospitals are conducting clinical trials of nonsurgical procedures based on the use of lung sealants to treat lung hyperinflation caused by COPD; this will likely lead to the adoption of similar procedures in the United States.

## Restorative applications to fare well

Among dental applications, denture bonding agents, pit and fissure sealants, and restorative adhesives will continue to account for over 80 percent of demand through 2019. The most rapid growth is expected for restorative dental applications, with rapid gains also in smaller segments such as tissue bonding applications associated with periodontal care. However; total demand growth in dental applications will lag medical through 2019, limited by market maturity in pit and fissure sealants and in dental bonding agents.

## Study coverage

This upcoming Freedonia industry study, ***Medical & Dental Adhesives & Sealants***, is priced at $5200. It presents historical demand data (2004, 2009 and 2014) plus forecasts (2019 and 2024) by product, application and market. The study details key market environment factors, analyzes company market share and profiles 25 US industry players.

**Preliminary Table of Contents/ List of Tables & Charts**

# NEW *Industry Study with Forecasts for 2019 & 2024*

# Medical & Dental Adhesives & Sealants

# This study can help you:

- Determine your market & sales potential
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- Complement your research & planning
- Gather data for presentations
- Confirm your own internal data
- Make better business decisions

**APPLICATIONS**

**Pit & Fissure Sealants**

Dema percent per year to $ rket pen- etration of th ffective in the preventic 9 years old with one d 1994 to 32.3% betwe short of the 2010 goa o improve the health of all Americans, it still represents significant growth in the usage of sealants.

**SAMPLE TEXT**
Explanations that support each table's numbers & projections

Pit and fissure sealants were first commercially available in the 1970s. Pit and fissure materials are used as a preventive, anti-caries measure, forming a protective barrier over the depressions and grooves of chewing surfaces on back teeth, or molars. This barrier has been shown to reduce decay by 80 percent for two years following the application and remain effective for nearly five years. Pit and fissure sealants are most effective on teeth that have no detectable cavities. The majority of pit and fissure sealants are applied to the teeth of children and adolescents. To a much lesser extent, adults are engaging in this procedure. However, many adults already have cavities so the application of these sealants is inefficient.

Pit and fissure sealants are characterized by type: resin or glass ionomer; by cure: chemical cure or light cure; and by whether or not they are unfilled or contain inorganics such as glass or quartz. Pit and fissure sealants are cured one of two ways, either chemically (e.g., autopolymerization) or via radiation (e.g., ultraviolet light, visible light or electron beam). The dominant material used in pit and fissure sealants is bisphenol-A-glycidyl methacrylate (BIS-GMA). As IS-GMA sealants do not adhere to enamel, the teeth have to be primed with an cid solution, using a technique commonly called acid etch.



**COMPANY PROFILES**
Profiles of 25 US industry competitors such as Baxter International, Johnson & Johnson, Pfizer, Procter & Gamble, DENTSPLY International & Stryker

**APPLICATIONS**

for use in the US because the FDA regulatory process requires that products be both safe and effective while the European process requires only safety. PLEURASEAL received CE mark approval in September 2006 as a sealant for preventing air leaks in pulmonary resect clinical study required for FDA approva studies in Europe. In 2010, the FDA rep received PleuraSeal had poor outcomes were closed using standard techniques i all product used world wide and discont This failure was highlighted in a 2012 r and Ineffective Devices Approved in the US," and since then, FDA has cited the failure to Congress when defending the time-consuming clinical trials required for US approval. Other products used in Europe for pulmonary applications but unapproved in the US include BIOGLUE (Cryolife), VIVOSTAT FIBRIN SEALANT (Vivostat A/S), and TISSUEPATCH (Tissuemed), which is a synthetic adhesive film that covalently bonds to tissue.

**SAMPLE TEXT**
Data illustrated with the aid of 66 tables & charts

TABLE IV-7

PULMONARY APPLICATIONS FOR ADHESIVES & SEALANTS
(million dollars)

| Item | 2004 | 2009 | 2014 | 2019 | 2024 |
|---|---|---|---|---|---|
| Respiratory Surgical Procedures (000) | | | | | |
| $ adhesives/respiratory procedure | | | | | |
| Pulmonary Adhesives & Sealants | | | | | |
| Fibrin | | | | | |
| Albumin | | | | | |
| PEG | | | | | |
| Other | | | | | |
| % pulmonary | | | | | |
| Internal Medical Applications | | | | | |

**SAMPLE TABLE**
Presents historical data (2004, 2009, 2014) as well as Freedonia forecasts for 2019 & 2024



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- Establishing consistent economic & market forecasts
- Using input/output ratios, flow charts & other economic methods to quantify data
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### World Adhesives & Sealants

Global demand for adhesives and sealants is forecast to rise 4.5 percent per year through 2019 to 20.2 million metric tons, valued at $64 billion. Packaging will remain the leading outlet, while construction will capture increased share. Reactive adhesives and sealants will be the fastest growing products. This study analyzes the 16.1 million metric ton world adhesives and sealants industry, with forecasts for 2019 and 2024 by product and market for six world regions and 18 major countries. The study also evaluates company market share and profiles industry players.

*#3377............... January 2016 ................ $6300*

### Adhesives & Sealants

US demand for adhesives and sealants is forecast to increase 2.8 percent per year to 6.4 billion pounds in 2019, valued at $12.8 billion. Reactive adhesives and sealants will be the fastest growing types. The construction market will lead gains, while the manufacturing and assembly market will remain the largest segment. This study analyzes the 5.6 billion pound US adhesives and sealants industry, with forecasts for 2019 and 2024 by product and market. The study also evaluates company market share and profiles industry players.

*#3257............. February 2015 ............... $5400*

### Dental Products & Materials

US demand for dental products and materials will rise 3.4 percent yearly to $12.7 billion in 2019. Cosmetic and repair/restorative products will be the fastest growing professional products. Among consumer products, value-added formulations will drive the dominant toothpaste segment. Polymers, ceramics and minerals will lead gains in dental materials. This study analyzes the $10.7 billion US dental product and material industry, with forecasts for 2019 and 2024 by product and raw material. The study also evaluates company market share and profiles industry competitors.

*#3359............... January 2016 ................ $5200*

### Biocompatible Materials

US demand for biocompatible materials is forecast to increase 4.9 percent annually to $5.6 billion in 2018. Ceramic materials will grow the fastest based on improved nanotechnology compounds for orthopedic implants, spinal fixation devices and dental products. Natural polymers will be the second fastest growing segment, paced by hyaluronic acid. This study analyzes the $4.4 billion US biocompatible materials industry, with forecasts for 2018 and 2023 by product and application. The study also evaluates company market share and profiles industry players.

*#3223............. December 2014 .............. $5200*

### Waxes

US demand for waxes will rise 1.8 percent annually through 2019 to three billion pounds, with value demand reaching $3.2 billion. Petroleum and mineral waxes will remain the dominant types, while synthetic waxes will grow the fastest. The leading industrial market will provide the best opportunities, particularly in the production of coatings and inks, adhesives, and building boards. This study analyzes the $2.4 billion US wax industry, with forecasts for 2019 and 2024 by type and market. The study also evaluates company market share and profiles industry players.

*#3271.................. May 2015 ................... $5200*

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