

Natural Polymers

US Industry Study with Forecasts for 2020 & 2025

Study #3415 | May 2016 | \$5300



Shifts in natural polymer landscape

The fracking boom in North America reached its apex in the 2010-2015 period. Now the key natural polymers used in oilfield applications, guar gum and xanthan gum, will see more moderate growth going forward. However, the rising popularity of gluten-free foods should drive use of xanthan gum. Increasing demand for green alternatives in industries such as packaging and textiles will catapult other natural polymers into strong double-digit growth in the forecast period. Furthermore, food ingredients that offer pleasing eating and drinking experiences will propel growth for pectin. In addition, cellulose ethers will be supported by ongoing demand for water-based, low VOC coatings.

New product introductions

Recent products include the 2015 US FDA-approved JUVEDERM ULTRA XC, which is made from hyaluronic acid, manufactured by Allergan for lip augmentations that lasts up to a year. Hyaluronic acid is exhibiting a surge in popularity as not only a dermal filler but also a moisturizer in topical applications. In food and beverage applications, to combat supply constraints and meet demands of the marketplace, TIC Gums has introduced a variety of pectin substitutes that contain natural polymers such as alginates, agar, and locust bean gum.

Weather & politics affect demand

Much of the change in natural polymer demand and pricing is due to the current state of supply, which is subject to various regions' weather and geopolitical situations. Many natural polymers are indigenous to certain parts of the world. Poor crop yields in key growing areas have caused supply pinches and price inflation in pectin, for example, and has caused end users to seek out alternatives. Oil and gas producers, too, briefly sought out alternative solutions, namely to guar gum, as prices rose nearly tenfold between 2011 and 2012! Guar gum is mainly imported and openly traded on exchanges in India, where regulators suspended trading before it returned to lower price levels in 2013.

Study coverage

This study analyzes the US market for natural polymers. It presents historical demand data (2005, 2010 and 2015) plus forecasts (2020 and 2025) by market (food and beverages, medical, oilfield, cosmetics and toiletries, coatings and inks, construction, adhesives, packaging, textiles, other) and product (cellulose ethers, starch and fermentation polymers, exudate and vegetable gums, protein-based polymers, marine polymers, other). The study also assesses key market environment factors, analyzes the industry structure, evaluates company market share and profiles US industry competitors.

CONTENTS SUMMARY

Executive Summary

Market Environment

Markets

Food & Beverages

Food & Beverage Industry Overview

Natural Polymer Demand

Confections & Baked Goods

Dairy & Desserts

Other

Medical

Pharmaceutical Overview

Natural Polymer Demand

Pharmaceuticals

Wound Care Products

Orthopedic Injections

Other

Oilfield

Petroleum/Natural Gas Industry Overview

Natural Polymer Demand

Applications

Polymers

Cosmetic & Toiletries

Cosmetic & Toiletry Industry Overview

Natural Polymer Demand

Coatings & Inks

Coatings & Inks Industry Overview

Natural Polymer Demand

Construction

Building Construction Overview

Natural Polymer Demand

Adhesives

Adhesive Industry Overview

Natural Polymer Demand

Packaging

Packaging Industry Overview

Natural Polymer Demand

Textiles

Textile Industry Overview

Natural Polymer Demand

Other Markets

Products

Cellulose Ethers

Methyl Cellulose

Microcrystalline Cellulose

Carboxymethyl Cellulose

Hydroxymethyl Cellulose

Other Cellulose Ethers

Starch & Fermentation Polymers

Xanthan Gum

Markets

Producers

Starch Derivatives

Polylactic Acid

Hyaluronic Acid

Other Starch & Fermentation Polymers

Exudate & Vegetable Gums

Guar Gum

Gum Arabic

Other Exudate & Vegetable Gums

Protein-Based Polymers

Collagen

Other Protein-Based Polymers

Marine Polymers

Alginates

Carrageenan

Other Marine Polymers

Other

Pectin

Natural Phenolics

All Other

Industry Structure

Market Share

Acquisitions & Divestitures

Marketing Strategies

Channels of Distribution

Research & Development

Competitive Strategies

Cooperative Agreements

Company Profiles

TABLES & CHARTS

Executive Summary

1 Summary Table

Markets

1 Natural Polymer Demand by Market

Cht Natural Polymer Demand

by Market, 2015

2 Food & Beverage Shipments

3 Food & Beverage Demand for Natural

Polymers by Application & Product

Cht Food & Beverage Demand for

Natural Polymers by Product, 2015

4 Confection & Baked Goods Demand

for Natural Polymers

5 Dairy & Dessert Demand

for Natural Polymers

6 Other Food & Beverage Demand

for Natural Polymers

7 Pharmaceutical Supply & Demand

8 Medical Demand for Natural Polymers

by Application & Product

Cht Medical Demand for Natural

Polymers by Product, 2015

9 Oil & Gas Production

10 Oilfield Demand for Natural Polymers by Product

11 Cosmetic & Toiletry Supply & Demand

12 Cosmetic & Toiletry Demand

for Natural Polymers

Cht Cosmetic & Toiletry Demand for

Natural Polymers by Product, 2015

13 Coatings & Printing Ink Indicators

14 Coatings & Ink Demand

for Natural Polymers

15 Building Construction Expenditures

16 Construction Demand

for Natural Polymers

17 Adhesive Shipments

18 Adhesive Demand for

Natural Polymers

19 Packaging Supply & Demand

20 Packaging Demand for Natural

Polymers by Application & Product

21 Textile Mill Product Shipments

22 Textile Demand for Natural Polymers

23 Other Markets for Natural Polymers

Products

1 Natural Polymer Demand by Type

Cht Natural Polymer Demand

by Type, 2015

2 Cellulose Ether Demand

3 Methyl Cellulose Demand

4 Hydroxyethyl Cellulose Demand

5 Microcrystalline Cellulose Demand

6 Carboxymethyl Cellulose Demand

7 Other Cellulose Ether Demand

8 Starch/Fermentation Polymer Demand

9 Xanthan Gum Demand

10 Starch Derivative Demand

11 Polylactic Acid Demand

12 Hyaluronic Acid Demand

13 Other Starch & Fermentation

Polymer Demand

14 Exudate & Vegetable Gum Demand

15 Guar Gum Demand

16 Gum Arabic Demand

17 Other Exudate & Vegetable

Gum Demand

18 Protein-Based Polymer Demand

19 Collagen Demand

20 Other Protein-Based Polymer Demand

21 Marine Polymer Demand

22 Carrageenan Demand

23 Alginate Demand

24 Other Marine Polymer Demand

25 Other Natural Polymer Demand

Industry Structure

1 US Natural Polymer Sales

by Company, 2015

1 US Natural Polymer

Market Share, 2015

2 Selected Acquisitions & Divestitures

3 Selected Cooperative Agreements

MARKETS

Food and Beverages: Natural Polymer Demand

Demand for natural polymer demand in the food and beverage market is forecast to rise to 1.5 billion pounds in 2020, reaching 2.0 billion pounds by 2025. The industry represents a large and maturing market supported by trends that favor natural ingredients. The popularity of functional foods, the leading outlet for natural polymer products, is driving the rising use of these polymers as emulsifiers and stabilizers. Starch and xanthan gum represent the leading product types and will maintain strong positions going forward, continuing to benefit from their suitability as substitutes for guar gum. Demand for xanthan gum will also be supported by its use as a substitute for wheat gluten in gluten-free products which are sustaining their popularity.

Demand for CMC and xanthan gum, as well as other gum types, will be aided by the desire among food and beverage processors to reformulate their products in an effort to reduce or diversify away from an over-reliance on any single natural polymer additive. Processors are forced to shift away from guar gum due to concerns regarding the cost and availability of the hydrocolloid in the early part of this decade. The trend toward hydraulic fracturing in the oil and gas industry generated significant demand for guar gum, which in turn resulted in supply concerns and drove prices sharply upward. More recently, the same concerns for pectin, for example, have prompted companies like TIC to offer food additive pectin substitutes. As such, food and beverage producers seeking out products with more stable supply and pricing are increasingly utilizing alternatives like CMC and xanthan gum, as well as agar, carrageenan, locust bean gum, starches, tara gum, and various blends developed by natural polymer suppliers.

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TABLE IV-8

STARCH & FERMENTATION POLYMER DEMAND (million dollars)

Item	2005	2010	2015	2020	2025
Packaging Shipments (bil 2009\$) lb starch & ferm/000\$ pkg					
Starch/Fermentation Polymers (mil lb)					
\$/lb					
Starch & Fermentation Polymer Demand					
Starch Derivatives					
Xanthan Gum					
Polylactic Acid					
Hyaluronic Acid					
Other					
% starch & fermentation Natural Polymer Demand					

Source: The Freedonia Group

TABLE III-12

COSMETIC & TOILETRY DEMAND FOR NATURAL POLYMERS (million dollars)

Item	2005	2010	2015	2020	2025
Cosmetic & Toiletry Shpts (mil 2009\$) lb polymer/000\$ cosmetic & toiletry					
Natural Polymer Demand (mil lb)					
\$/lb					
Natural Polymer Demand					
Protein-Based Polymers					
Cellulose Ethers					
Starch & Fermentation Products					
Marine Polymers					
Other					

Source: The Freedonia Group

This study can help you:

- Determine your market & sales potential
- Learn more about industry competitors
- Assess new products & technologies
- Identify firms to merge with or acquire
- Complement your research & planning
- Gather data for presentations
- Confirm your own internal data
- Make better business decisions

Related Studies

Silicones

US demand for silicones will climb 4.5 percent annually to \$4.4 billion in 2020, with volume rising 2.6 percent per year to 908 million pounds. This will be a moderation from the previous 5-year pace. Silicone elastomers and resins will remain the fastest growing products. The industrial market will remain dominant, but will be outpaced by medical and construction uses. This study analyzes the \$3.5 billion US silicone market, with forecasts for 2020 and 2025 by product, market, and application. The study also evaluates company market share and profiles industry players. #3391..... March 2016..... \$5300

Custom Thermoplastic Compounding

US demand for custom compounded thermoplastics will rise 3.2 percent annually to 10.6 billion pounds in 2019, valued at nearly \$19 billion. The construction market will grow the fastest, nearly twice the pace of the next fastest growing market, wire and cable. Compounded thermoplastic PVC will continue to offer the best growth opportunities. This study analyzes the 9.1 billion pound US custom compounded thermoplastic industry, with forecasts for 2019 and 2024 by resin and market. The study also evaluates company market share and profiles industry players. #3336..... October 2015..... \$5300

Fluoropolymers

US demand for fluoropolymers will rise 5.3 percent per year to \$2.3 billion in 2019, with volume totaling 180 million pounds. Polytetrafluoroethylene (PTFE) will remain the largest value segment, while polyvinylidene fluoride (PVDF) and polyvinyl fluoride (PVF) will grow at the fastest rates. The construction and electrical/electronic markets will grow the fastest. This study analyzes the \$1.8 billion US fluoropolymer industry, with forecasts for 2019 and 2024 by product, application and market. The study also evaluates company market share and profiles industry players. #3278..... June 2015..... \$5300

Engineering Plastics

Demand for engineering plastics in the US is expected to rise 2.6 percent per year to 5.1 billion pounds in 2019. Nylon, ABS, and polycarbonate will remain the three largest engineering plastics by volume, with nylon the fastest growing of the three. Smaller-volume engineering plastics such as polyphenylene sulfide, sulfone polymers, and fluoropolymers will grow the fastest. This study details the 4.5 billion pound US engineering plastic industry, with forecasts for 2019 and 2024 by resin and market. The study also evaluates company market share and profiles industry players. #3242..... April 2015..... \$5300

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Freedonia's methods

- Establishing consistent economic & market forecasts
- Using input/output ratios, flow charts & other economic methods to quantify data
- Employing in-house analysts who meet stringent quality standards
- Interviewing key industry participants, experts & end users
- Researching a proprietary database that includes trade publications, government reports & corporate literature

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