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Gaskets & Seals

US Industry Study with Forecasts for **2016 & 2021**

Study #2884 | May 2012 | \$4900 | 321 pages



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SEAL & PACKING SUPPLY & DEMAND

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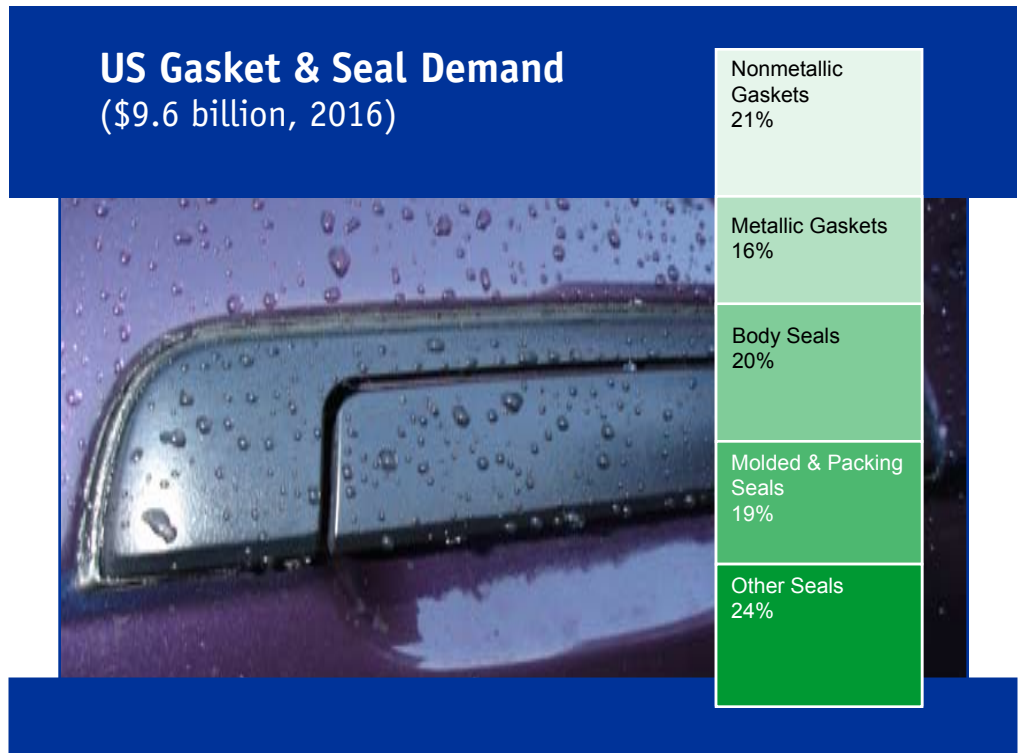
Rebounds in construction expenditures and motor vehicle production, as well as positive outlooks for capital spending and machinery production, will benefit gasket and seal manufacturers.

US demand to rise 4.6% annually through 2016

US demand for gaskets and seals is forecast to increase 4.6 percent per annum to \$9.6 billion in 2016, a substantially higher growth rate than during the 2006-2011 period. Rebounds in construction expenditures and motor vehicle production, as well as positive outlooks for capital spending and machinery production, will benefit gasket and seal manufacturers. Increased use of better performing gaskets and seals made from advanced materials, which offer improved lifespans over traditional sealing materials, will also stimulate dollar growth.

Motor vehicle, machinery markets to lead gains

The marine and rail market is projected to post the most rapid growth through 2016 of any of the major gasket and seal markets. Sizable replacement product sales opportunities and the positive outlook for marine and rail equipment shipments will bolster sales gains. However, because of their much larger shares of overall demand, the motor vehicle and machinery industries will record much stronger increases in dollar terms. A rebound in motor vehicle production and a rise in the number of motor vehicles in use will fuel sales of related gasket and sealing products. In addition, the rising use of better performing, higher-priced gaskets and seals will further drive value gains. Increases in



machinery gasket and seal demand will be supported by the existence of a large aftermarket, reflecting the harsh conditions that many machinery products operate in; and an increase in machinery outputs as capital expenditures rise.

Best gains seen for compression packings, body seals & expanded graphite gaskets

Among all gasket and sealing products, compression packings, body seals, and expanded graphite gaskets will register the strongest growth through 2016. Demand for compression packings will be spurred by increases in machinery

output and capital spending. The rebound in motor vehicle production will be the primary factor driving body seal demand, and expanded graphite gaskets will continue to supplant traditional gasketing materials in a variety of motor vehicle and machinery settings because of their high chemical and temperature resistance and light weight.

In 2011, OEM applications made up over three-fifths of all gasket and seal sales. Aftermarket product demand was greater than OEM sales in the machinery market and equal to OEM demand in aerospace applications. Replacement sales in the electric and electronic products market, however, only accounted for 28 percent of the 2011 sales total.

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Sample Text, Table & Chart

GASKET SUPPLY & DEMAND

**SAMPLE
TEXT**

Thermoplastic Elastomers -- The market for gaskets and seals is expected to increase at a rate of 1.5 percent per year through 2021. This increase is due to a number of factors, including the increase in demand for durable goods shipments, the growth of the machinery and electrical & electronic products sectors, and the increasing use of TPEs in a wide range of applications. TPEs have a number of advantages over other materials, including their low resistance to aging, their ability to be processed into a wide range of shapes and sizes, and their low cost. Furthermore, some TPEs possess excellent performance characteristics, such as high-temperature resistance and excellent chemical resistance. These characteristics will lead to greater use in the medical industries. As with nonmetallic gaskets as a whole, the outlook for machinery shipments and motor vehicle production support sales advances. Restricting sales gains will be competition from lower-cost materials like commodity rubber and performance plastics in high-temperature applications.

TPEs, which are sometimes referred to as thermoplastic rubbers, are a physical mix of polymers, almost always plastics and rubber. These mixes are comprised of both soft and hard segments. The soft portion of the mix is usually a type of thermoset particle, while the hard segment is a thermoplastic material. TPEs combine the ease of processability of thermoplastics with the durability and resistance of elastomers. TPE gaskets can be divided into five generic families: copolyester elastomers (COPEs), styrenic block copolymers (SBCs), thermoplastic polyolefins (TPOs), thermoplastic polyurethanes (TPUs), and thermoplastic vulcanizates (TPVs). All of these types of TPEs can be utilized in gaskets and seals, although COPEs and TPVs have the best prospects for growth. COPEs can operate in a wide temperature range (from about -100 degrees Fahrenheit to 275 degrees Fahrenheit) and offer superior resistance to petroleum, fire, and chemicals. TPVs also offer exceptional performance in harsh environments, with good abrasion resistance, flame retardance, fungus resistance, ultraviolet light resistance, a low coefficient of expansion, and high heat resistance.

TABLE VI-1

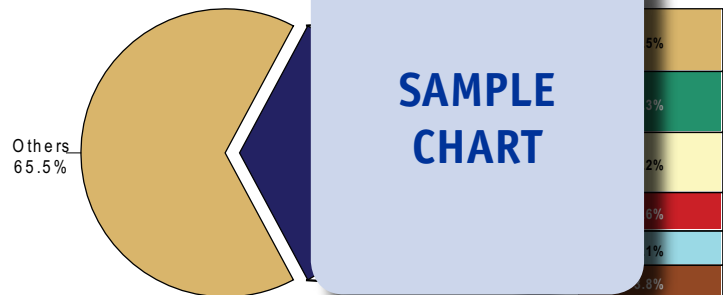
GASKET & SEAL DEMAND BY MARKET & SOURCE
 (million dollars)

Item	2001	2006	2011	2016	2021
Durable Goods Shipments (bil \$)					
\$ gaskets & seals/000\$ durables					
Gasket & Seal Demand					
By Market:					
Motor Vehicles					
Machinery					
Electrical & Electronic Products					
Aerospace					
Marine & Rail					
Other					
By Source:					
OEM					
Aftermarket					

**SAMPLE
TABLE**

CHART VII-1

US GASKET & SEAL MARKET SHARE, 2011

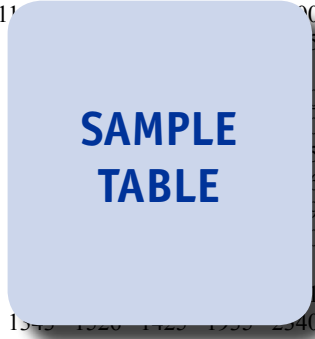


**SAMPLE
CHART**

Sample Profile, Table & Forecast

TABLE V-6
MOTOR VEHICLE BODY SEAL DEMAND
 (million dollars)

Item	2001	2006	2011	2016	2021
Motor Vehicle Production (000 units) 11					
\$ body seals/vehicle					
Motor Vehicle Body Seal Demand					
OEM:					
Automobiles					
Light Trucks					
Medium & Heavy Vehicles					
Aftermarket					
% motor vehicle					
Body Seal Demand	1545	1326	1425	1755	2340



COMPANY PROFILES

Greene, Tweed & Company
 2075 Detwiler Road
 Kulpsville, PA 19443
 215-256-9521
 http://www.gtc.com

Annual Sales:
 Employment:

Key Products: oilfield, petro-chem and power

SAMPLE PROFILE

Greene, Tweed & Company (GTC) designs, engineers and produces specialty seals and engineered plastic components. The privately held company manufactures six primary groups of products: sealing components, materials, composite components, connector systems, engineered components, and vision systems.

The Company operates in the US gasket and seal market through the manufacture and sale of over 100 seal products for use in the aerospace, oilfield, petrochem and power, and semiconductor and solar industries, among others. GTC also produces various engineered materials for use in the manufacture of sealing products.

GTC's Seal Products -- For the aerospace market GTC manufactures products such as cap seals, scrapers/wipers, rubber spring seals, and T-rings. Cap seals, which are O-ring energized seals, include ADVANCAP and GLIDETEC types. ADVANCAP seals are made from GTC's own AVALON brand polytetrafluoroethylene (PTFE) and designed to prevent extrusion and eliminate O-ring spiral failure in dynamic applications such as rods and pistons. GLIDETEC seals consist

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"The OEM motor vehicle body seal market was \$1.1 billion in 2011. Light trucks accounted for the biggest share of OEM body seal sales, with 62 percent of the 2011 total. Automobiles were the second largest category with 36 percent of the market total, and medium and heavy trucks accounted for the remainder. Each of the motor vehicle markets will rebound from the sales declines registered during the 2006-2011 period. Increasing at 11 percent per year, automobile OEM body seals are expected to record the strongest gains of any single gasket and sealing product through 2016."
 --Section V, pg. 97

OTHER STUDIES

Automotive Aftermarket in North America

The North American light vehicle aftermarket is projected to rise 3.2 percent annually to \$85.5 billion in 2016. The US will record the slowest gains but will represent four-fifths of the region's total sales growth. Electronics will be the fastest growing product segment. The dominant professional market will outpace the DIY segment. This study analyzes the \$73 billion automotive aftermarket in North America, with forecasts for 2016 and 2021 by country, product and service performer. The study also evaluates company market shares and profiles industry participants.

#2927 August 2012 \$5100

World Industrial Fasteners

Global sales of industrial fasteners are expected to climb 5.2 percent per year to \$82.9 billion in 2016. Standard externally threaded fasteners will remain the dominant product segment and will post the largest value gains. The Asia/Pacific region will record the fastest demand gains, driven by India and China. This study analyzes the \$64 billion world industrial fastener industry, with forecasts for 2016 and 2021 by product, market, world region and for 27 major countries. The study also evaluates company market share and profiles industry participants.

#2915 September 2012 \$6300

World Bearings

Global demand for bearings will rise 7.8 percent yearly to \$96 billion in 2016. The Asia/Pacific region will post the fastest gains and account for more than half of the world total. Unmounted ball bearings will remain the best selling type, followed closely by unmounted roller bearings, which will experience the fastest sales gains. This study analyzes the \$65.9 billion world bearings industry, with forecasts for 2016 and 2021 by product, market, world region and for 30 countries. The study also evaluates company market shares and profiles industry players.

#2903 July 2012 \$6300

World Industrial Rubber Products

The global market for industrial rubber products is projected to increase 5.8 percent per year to \$140 billion in 2016. The Asia/Pacific region -- the largest market -- is also forecast to post the best annual growth, led by China. The motor vehicle market will grow the fastest while industrial equipment remains the largest market. This study analyzes the \$105.5 billion world industrial rubber product industry, with forecasts for 2016 and 2021 by market, product, world region and for 27 countries. The study also evaluates company market shares and profiles industry players.

#2888 May 2012 \$6100

World Diesel Engines

World demand for diesel engines is projected to grow 6.7 percent per year through 2015 to \$197.5 billion. Growth in the key Asia/Pacific region will be led by China and India, as expanding motor vehicle and off-highway equipment output combines with more fixed investment. Demand in North America and Western Europe will improve. This study analyzes the \$143 billion world diesel engine industry, with forecasts for 2015 and 2020 by application, world region and for 36 countries. The study also evaluates company market share and profiles industry players.

#2864 April 2012 \$5900

About The Freedonia Group

The Freedonia Group, Inc., is a leading international industry market research company that provides its clients with information and analysis needed to make informed strategic decisions for their businesses. Studies help clients identify business opportunities, develop strategies, make investment decisions and evaluate opportunities and threats. Freedonia research is designed to deliver unbiased views and reliable outlooks to assist clients in making the right decisions. Freedonia capitalizes on the resources of its proprietary in-house research team of experienced economists, professional analysts, industry researchers and editorial groups. Freedonia covers a diverse group of industries throughout the United States, the emerging China market, and other world markets. Industries analyzed by Freedonia include:

- Chemicals • Plastics • Life Sciences • Packaging • Building Materials • Security & Electronics • Industrial Components & Equipment • Automotive & Transportation Equipment • Household Goods • Energy/Power Equipment

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