Custom Thermoplastic Compounding

Industry Study with Forecasts for 2019 & 2024

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A growth in construction expenditures, coupled with the increase of independent compounders that meet specific performance requirements, will boost US demand for custom thermoplastic compounding.

**US demand to reach 10.6 billion pounds in 2019**

Demand for custom compounded thermoplastics in the US is forecast to grow 3.2 percent annually to 10.6 billion pounds in 2019, valued at nearly $19 billion (including resins, additives, fillers, and other production costs). Advances will mainly be fueled by growth in construction expenditures, which will continue to rebound from the declines between 2006 and 2011. Additionally, custom compounders will continue to make new technological advances to differentiate their products in the marketplace and widen the range of usage of plastic compounds. As a result, the share of thermoplastic demand that is custom compounded will increase as compounders continue to penetrate new applications. Independent compounders are expected to exhibit the most growth in small volume markets or where customers have specific performance requirements. In contrast, larger compounders and resin manufacturers primarily serve high volume and well established markets.

**PVC to remain dominant compounded thermoplastic**

Polyvinyl chloride will continue to be the most commonly compounded thermoplastic, representing nearly one-third of total demand in 2019, and will also expand at the fastest pace. This fast growth will result from rapid expansion in construction applications, where the resin is utilized in a myriad of products such as pipe and fittings, siding, windows and doors, roofing, decking, fencing, flooring, and wallcoverings. PVC’s light weight, strength, and abrasion resistance make it a versatile material in new construction and repairs. Polyethylene compounds will also grow rapidly, driven by rising demand in pipe applications and the wire and cable market. Thermoplastic elastomers are highly customizable and are increasingly used in both medical and motor vehicle applications.

**Construction to be fastest growing market**

Among the major markets for custom compounded thermoplastics, construction will grow the fastest -- nearly twice the pace as wire and cable, the next fastest growing market. Strong increases in residential building activity will be the primary driver of gains, while a rebound in nonresidential building spending will further bolster demand. Compounded thermoplastics have many construction applications and will continue to replace metal, wood, and other traditional materials. PVC will remain the most commonly utilized resin in the construction market, while polyethylene will expand at the most rapid rate, propelled by demand for polyethylene pipe. The second largest market, motor vehicles, will experience slower growth, but will still provide strong opportunities for compounded thermoplastics due to their ability to reduce vehicle weight and thus improve fuel economy. In the electrical and electronics market, the trend toward miniaturization will continue to create demand for new compounded thermoplastics with improved performance characteristics. Medical applications will grow rapidly due to increased healthcare spending and the development of products and devices, such as catheters and medical equipment housings, that incorporate antimicrobial additives.

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MARKETS

Electrical & Electronic Equipment Outlook

US shipments of electrical and electronic equipment are forecast to rise from $456 billion in 2014 to $470 billion in 2019, trailing manufacturer shipments as a whole. Performance will represent a continuation of the growth from the 2009-2014 period. Overall shipments of electrical equipment will be limited by the continued dominance of US manufacturers in the global electronics industry. Advances will be promoted by overall economic growth, resulting in increased output of measurement and control instruments. In addition, the construction market is anticipated to achieve strong gains, thus spurring growth in the electrical equipment segment.

Like the industries that make use of electrical and electronic products, the segment is sensitive to factors such as capital spending and consumer behavior. Moreover, as technology has evolved, electrical equipment has encountered functional competition from electronic products as well as fluid power and mechanical technologies in certain settings, which has restricted opportunities. However, some categories in the segment, including high definition (HD) televisions and tablet computers, have experienced strong gains in recent years.

Measuring and control instruments include a wide range of navigational, measuring, electromedical, and control instruments that find use in medical, military, and industrial applications. Shipments of measuring and control instruments grew substantially from 2003 through 2008, due mainly to increases in military applications for these devices, which benefited from the ramping up of the US military presence in Afghanistan and Iraq during this period. Shipment levels fell in 2009 due to recession and its effect on manufacturing output, which restricted demand for such devices in industrial applications. Production of measuring and control instruments recovered from 2010 through 2014 as the economy improved. Through 2019, shipments of measuring and control instruments are forecast to increase as the economy recovers.
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Italy
39-543-790-411
http://www.softerspa.com

Annual Sales: $300 million (verified by company, 9/15)
Employment: 550 (verified by company, 9/15)
Key Products: thermoplastic elastomer and engineering thermoplastic compounds

SO.F.TER is a manufacturer of thermoplastic compounds, including thermoplastic elastomers (TPEs) and engineering thermoplastics for automotive, home appliance, footwear, artificial turf infill, sport, construction, and other applications. The Company is privately held.

The Company is active in the US thermoplastic compounding industry via the manufacture and sale of TPE compounds and engineered thermoplastic compounds. SO.F.TER’s range of TPE compounds includes products sold under such brand names as SOFPRENE, TERRA, LAREPRENE, FORPRENE, FORFLEX, SOFPUR, PIBIFLEX, HOLO, and FORGRIN. For example, SOFPRENE products are styrenic block copolymers (SBCs) based on styrene-butadiene-styrene (SBS). These SBCs include footwear compounds that are engineered to provide easy processability, allowing the production of rubber-like soles without a long curing process. In September 2015, SO.F.TER expanded its line of TPE compound offerings with the introduction of LAPRENE 83FE00864, a styrene-ethylene-butylene-styrene compound formulated for use in the production of elastic films that exhibit enhanced softness, transparency, elastic recovery, and tear resistance.

TABLE IV-6

MOTOR VEHICLE MARKET FOR COMPOUNDED THERMOPLASTICS BY RESIN
(million pounds)

<table>
<thead>
<tr>
<th>Item</th>
<th>2004</th>
<th>2009</th>
<th>2014</th>
<th>2019</th>
<th>2024</th>
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</thead>
<tbody>
<tr>
<td>Motor Vehicle Production (000 units)</td>
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<tr>
<td>lbs TP/vehicle</td>
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<tr>
<td>Thermoplastics in Motor Vehicles*</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>% compounded</td>
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<tr>
<td>Compounded TPs in Motor Vehicles</td>
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<tr>
<td>Polypropylene</td>
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<td></td>
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<tr>
<td>Engineering Thermoplastics</td>
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<tr>
<td>Thermoplastic Elastomers</td>
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<tr>
<td>Polyethylene</td>
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<tr>
<td>Polyvinyl Chloride</td>
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<tr>
<td>Other</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>% motor vehicles</td>
<td></td>
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<tr>
<td>Compounded Thermoplastics Demand</td>
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</table>

* includes thermoplastic elastomers  
Source: The Freedonia Group, Inc.
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Related Studies

**World Siding (Cladding)**
The global siding market is projected to grow 4.2 percent yearly through 2019 to 5.9 billion square meters, valued at $60 billion. North America will post the fastest market gains while the Asia/Pacific region will account for half of additional global demand. Metal, vinyl, stucco and EIFS siding will grow the fastest. This study analyzes the 4.8 billion square meter world siding industry, with forecasts for 2019 and 2024 by product and market/application for six world regions and 20 major countries. The study also evaluates company market share and profiles industry players.

#3327 .......... September 2015 .......... $6500

**World Thermoplastic Elastomers**
World thermoplastic elastomer (TPE) demand will grow 5.2 percent annually to 6.7 million metric tons in 2019. Styrenic block copolymers will remain the largest segment, while thermoplastic vulcanizates and polyolefin elastomers will grow the fastest. China will remain the largest and fastest growing market. This study analyzes the 5.2 million metric ton world TPE industry, with forecasts for 2019 and 2024 by market and product for six world regions and 16 major countries. The study also evaluates company market share and profiles industry players.

#3326 .......... November 2015 .......... $6500

**World Plastic Pipe**
World demand for plastic pipe will rise 6.7 percent annually through 2019 to 19.3 billion meters. Construction applications account for the largest share of plastic pipe demand and will support growth through the forecast period. Growth in the Asia/Pacific region will slow, but it will remain the largest and fastest growing market. This study analyzes the 13.9 billion meter world plastic pipe industry, with forecasts for 2019 and 2024 by market and resin for six world regions and 19 major countries. The study also evaluates company market share and profiles industry competitors.

#3272 .......... July 2015 .......... $6500

**Insulated Wire & Cable**
US insulated wire and cable demand will rise 6.0 percent annually to $27 billion in 2019. Building wire and cable will remain the largest product segment and will be by far the fastest growing, followed by magnet and power wire and cable. Construction will be the fastest growing market, surpassing electrical equipment to become the largest segment. This study analyzes the $20.3 billion US insulated wire and cable industry, with forecasts for 2019 and 2024 by material, product, and market. The study also evaluates company market share and profiles industry players.

#3260 .......... May 2015 .......... $5300

**World Polyethylene**
Global polyethylene demand will rise 4.0 percent yearly to 99.6 million metric tons in 2018. The Asia/Pacific region will remain the largest and fastest growing market, driven by China. Following a decade of decline, North America will add nine million tons of production capacity through 2023. This study analyzes the 82 million metric ton world polyethylene industry, with capacity, production and demand forecasts for 2018 and 2023 by product, market, world region, and for 27 countries. The study also evaluates company market share and profiles industry players.

#3210 .......... October 2014 .......... $6200

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