

# Acrylic Resins and Plastics

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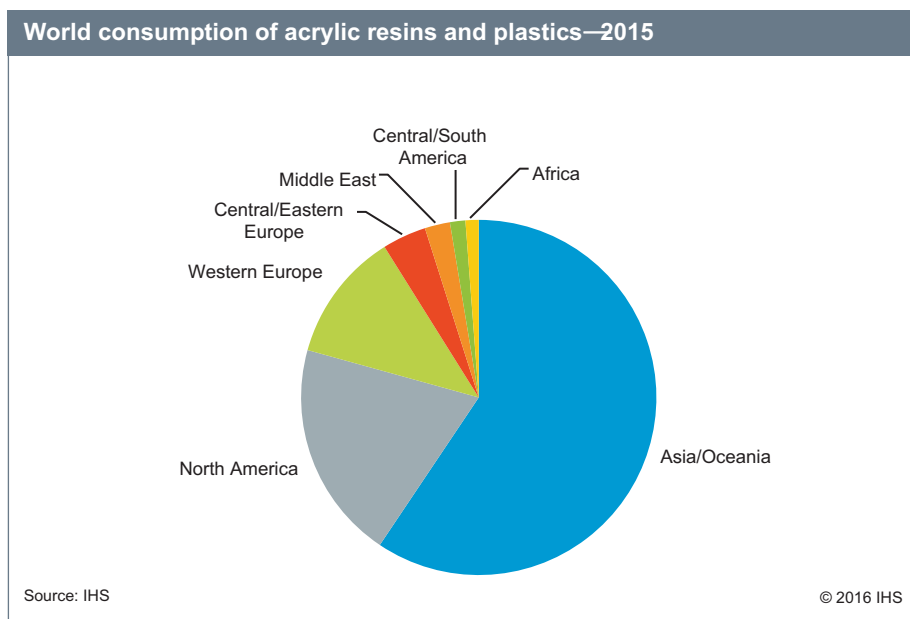
## Abstract

Acrylic resins are thermoplastic materials produced by the polymerization of methacrylic acid esters (methacrylates) or acrylic acid esters (acrylates). This report discusses the resins and plastics that are composed of over 50% polymethylmethacrylate (PMMA). These polymers are available in the form of sheet, molding and extrusion compounds (pellets, beads, or powder), rods, tubes and film.

Acrylic extruded sheet accounted for 35% of the world consumption of acrylic resins and plastics in 2015. Major applications include signs, merchandising displays, glazing, and lighting fixtures. World consumption of acrylic extruded sheet is forecast to grow at an average annual rate of 3% during 2015–20.

Acrylic molding and extrusion compounds, excluding extruded sheet, accounted for 33% of the world consumption of acrylic resins and plastics in 2015. Major applications include medical, automotive, appliances, lighting fixtures, and housewares. World consumption of acrylic molding and extrusion compounds, excluding extruded sheet, is forecast to grow at an average annual rate of 2.5% during 2015–20.

Acrylic cast sheet (includes cell-cast and continuous-cast sheet) accounted for 32% of the world consumption of acrylic resins and plastics in 2015. Major applications include sanitaryware (spas, shower units, tubs, and sinks), signs, merchandising displays, glazing, and large aquariums. World consumption of acrylic cast sheet is forecast to grow at an average annual rate of just over 3% during 2015–20.



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Demand for most downstream markets for acrylic resins and plastics is largely influenced by general macroeconomic conditions. As a result, demand for acrylic resins and plastics largely follows the patterns of the leading world economies. The major end-use markets include construction/remodeling, automotive/transportation, and original equipment manufacture (OEM). Growth has been strongest in China, where acrylic resins and plastics are dominant in construction and automotive applications, and in liquid crystal display and LED flat panel televisions and notebooks. Motor vehicle production has shown gains in most regions, and will improve during the forecast period from 2015 to 2020.

Asia (including Oceania) continues to be the largest market for acrylic resins and plastics, accounting for 59% of world consumption in 2015. US demand for acrylic resins and plastics is expected to grow moderately, at an average annual rate of about 2% during 2015–20. Western European consumption of acrylic resins and plastics is forecast to grow at an average annual rate of almost 2% during 2015–20. Japanese consumption is forecast to experience only slight growth during 2015–20, largely because of lower automotive manufacturing. Chinese and Other Asian demand, excluding Japan and Taiwan, is expected to grow at 4% and 3% annually, respectively, during the same period. African consumption of acrylic resins and plastics is forecast to grow the fastest, at an average annual rate of about 4.5% during 2015–20, but from a small base largely as the result of increased imports mainly for automotive, construction, and sign/display markets.

As of early 2016, the top five world producers of acrylic sheet and acrylic molding and extrusion compounds (not including captive extruded sheet) represented 60% of the total world capacity. The largest multinational companies, in terms of PMMA capacity/production, were Mitsubishi Rayon, Evonik, and Altuglas (Arkema).

During 2015–20, moderate world consumption growth is forecast for acrylic resins and plastics. Factors sustaining this average include some prominent continued recovery in world construction markets, as well as a healthy automotive industry, on a global level. In addition, increased disposable income, increased use in construction/architecture and new LED lighting introductions, and use in electronics will push up demand. In the longer term, acrylic resins, sheet, and film should offer more solutions for the solar industry and other electronic devices.

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