

# Chemical and Corrosive Resistant Plastics

## for the Recovering Petrochemical Market

Plastics in Chemical and Corrosion Resistance

by Nate Koenig

A new window of opportunity is opening for the specialty performance plastics market to take advantage of increased domestic investment in petroleum processing equipment. Capital investment stagnated due to the low oil prices of 2015 and early 2016, but forecasts for increased U.S. shale oil production and reduction of non-U.S. production are driving the resurgence.

The spring maintenance cycle can also be an opportunity as refineries go offline to perform routine processing equipment replacement or upgrades. This is a chance to offer your expertise with high-performance plastics designed for the petrochemical market to meet its demanding chemical and corrosive resistance needs. Of particular interest are the following materials:

**Extreme environment polyetheretherketone (PEEK) thermoplastics:** Extend operational time and manufacture stronger tools by specifying PEEK plastics for high temperature or corrosive processing requirements. Rely on its reputation for rigid quality control and ability to meet the stringent NORSOK standards for the oil and gas industries.



A composite image of PEEK, ETFE and PEI material shapes.

***“As market conditions shift and the oil and gas market begins to flourish again, reach out to IAPD manufacturers for support. They can help provide the technical data and range of specialty plastics needed for your growing petrochemical projects.”***

**Chemically inert and durable ethylene-tetrafluoroethylene (ETFE):** Combining high heat resistance, superior mechanical toughness and a low coefficient of friction, ETFE is inert to most solvents and chemicals. It's ideal for manufacturing pump housing and valves, pipe linings and fluid-handling components.

**Temperature and dielectrically stable polyetherimide (PEI):** A range of increased tensile and flexural strengths is available within the diverse grades of PEI. In addition, components made from PEI are heat-resistant to 340°F/171°C with low thermal expansion and creep, and show excellent hydrolytic and chemical stability for use in chemical processing applications.

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