



# PEI

Polyetherimide, Ultem®

## Description and Overview

An amorphous, transparent amber polymer, PEI is a high performance engineering thermoplastic that combines high temperature resistance, rigidity, impact strength, and creep resistance. It has no true melting point and is exceptionally stable at high temperatures, making it a suitable material for applications requiring heat resistance.

PEI has excellent mechanical properties and is resistant to radiation, hydrolysis, and chemicals.

## Applications and Uses

PEI has found use in medical applications because of its heat and radiation resistance, hydrolytic stability, and transparency. In electronics, it is used to make burn-in sockets, bobbins, and printed circuit substrates. The automotive industry uses PEI for lamp sockets and under-hood temperature sensors, and PEI plastic sheeting is used in aircraft interiors.

- Connectors: fiber optics, military, electrical, bulb sockets
- Telecom: broadband components, RF filters, waveguides
- Electrical: insulation, speaker cones
- Automotive: throttle bodies, lighting brackets
- Aircraft composites
- EMI/RFI shielding
- Sound dampening



Full sheet: 24" x 48" (0.25" through 2.0" thick)  
Rod: (0.5" through 4.0" diameter)


## Properties and Specifications


Property	PEI/Ultem®
Tensile Strength (psi)	17,000
Elongation	3%
Flexural Strength (psi)	27,000
Izod Impact Strength (ft-lbs/in.)	1
Hardness (Rockwell, Burnell)	R127, M114
Heat Deflection Temperature	410°F @ 264 psi
Specific Gravity	1.51
Affixable Properties	Chem / Mech

Properties are typical.  
Chem is an abbreviation for chemically affixed with glues, chemicals, or adhesive.  
Mech is an abbreviation for mechanically affixed bonding.  
Field testing is recommended for any application.

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 WARNING: This product can expose you to chemicals including Carbon, CAS 133-86-4, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

 WARNING: This product can expose you to chemicals including Bisphenol A, CAS 80-05-7, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)



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