



POLYPROPYLENE

Characteristics

- * High Tensile Strength
- * Resistant to Stress Cracking
- * Low Moisture Absorption
- * Resistant to Organic Solvents
- * Retains Properties at Elevated Temperatures

Description

Polypropylene is a lightweight heat-resistant, semi-rigid material ideally suited for use in applications at elevated temperature. In steam applications its low moisture absorption rate and resistance to staining makes it an excellent choice. High tensile strength coupled with impact resistance and high compressive strength allow it to be used in a multitude of structural applications. Polypropylene can easily be machined with wood or metal working tools into intricate shapes. Pieces can be joined by numerous welding techniques including both fusion and butt welding along with many other methods.

Forms Available

- ROD .375 to 7.00 " diameter, Lengths to 12 feet
- BUSHING Available upon Request
- PLATE .078" to 4.000" thick, Widths to 48", Lengths to 96"
- COLOR Opaque

Typical Property Values

MECHANICAL @ 73°F

| | |
|--|----------------------------------|
| Density | |
| Tensile Strength | psi |
| Tensile Modulus of Elasticity | psi |
| Tensile Elongation (at Break) | % |
| Flexural Strength | psi |
| Flexural Modulus of Elasticity | psi |
| Shear Strength | psi |
| Compressive Strength, 10% Deformation | psi |
| Compressive Modulus of Elasticity | psi |
| Hardness | Rockwell R |
| Izod Impact Strength, Notched | ft-lbs/in. of notch |
| Coefficient of Friction, Dynamic (Dry vs. Steel) | |
| Limiting PV (4 :1 Safety Factor Applied) | ft.lbs/in. ² min |
| Wear Factor | in ³ -min/ft.lbs. hr. |
| Water Absorption 24 hrs | % by wt. |

THERMAL

| | |
|--|------------|
| Coefficient of Linear Expansion (-40°F to 300°F) | in./in./°F |
| Heat Deflection Temperature @264 psi | °F |
| Melting Point (Crystalline) | °F |
| Continuous Service Temperature in Air | °F |
| Thermal Conductivity | °F |

ELECTRICAL

| | |
|---------------------------------|-----------|
| Dielectric Strength, Short Term | Volts/mil |
| Surface Resistivity | Ohms/Sq. |
| Dielectric Constant | 1 MHz |
| Dissipation Factor | 1 MHz |

Homopolymer

| |
|------------------------|
| 0.03 |
| 4,800 |
| 195,000 |
| 12 |
| 7,000 |
| 180,000 |
| 7,000 |
| 92 |
| 1.90 |
| < 0.01 |
| 6.2 x 10 ⁻⁵ |
| 125 |
| 327 |
| 180 |
| .76 - .81 |
| 500 - 660 |

Co-Polymer

| |
|------------------------|
| 0.03 |
| 4,800 |
| 23 |
| 5,400 |
| 160,000 |
| 6,000 |
| 80 |
| 7.50 |
| 0.01 |
| 6.6 x 10 ⁻⁵ |
| 110 |
| 327 |
| 170 |
| 475 |
| 0.0017 |

(Properties listed above are provided for reference only, they should not be used for design specifications or quality control)