

Alliance Polymers Zythane™ 6070A Thermoplastic Polyurethane Elastomer

Category : Polymer , Thermoplastic , Elastomer, TPE , Polyurethane TPE

Material Notes:

Zythane™ 6070A is a polycaprolactone-based TPU specifically formulated for injection molding applications .It exhibits excellent low compression set, abrasion resistance and toughness and has good hydrolytic stability, oil, fuel and solvent resistance. It is supplied uncolored in pellet form. Availability: North America Features: Fuel Resistant, Good Toughness, Oil Resistant, Hydrolytically Stable, Solvent Resistant, Good Abrasion Resistance Appearance: Colorless Forms: Pellets Processing Method: Injection Molding Information provided by Alliance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_Alliance-Polymers-Zythane-6070A-Thermoplastic-Polyurethane-Elastomer.php

| Physical Properties | Metric | English | Comments |
|---------------------|-----------|---------------------------|-----------|
| Density | 1.04 g/cc | 0.0376 lb/in ³ | ASTM D792 |

| Mechanical Properties | Metric | English | Comments |
|--------------------------------|--|---|-----------------------------|
| Hardness, Shore A | 70 | 70 | ASTM D2240 |
| Tensile Strength at Break | 24.0 MPa | 3480 psi | ASTM D412 |
| Tensile Stress | 12.0 MPa | 1740 psi | ASTM D412 |
| | @Strain 100 % | @Strain 100 % | |
| Elongation at Break | 18.0 MPa | 2610 psi | ASTM D412 |
| | @Strain 300 % | @Strain 300 % | |
| Tear Strength | 75.0 kN/m | 428 pli | Die C; ASTM D412 |
| Taber Abrasion, mg/1000 Cycles | 35 | 35 | ASTM D1044 |
| Abrasion | 28 | 28 | mm ³ ; DIN 53516 |
| Compression Set | 20 % | 20 % | ASTM D3995B |
| | @Temperature 22.8 °C, Time 79200 sec | @Temperature 73.0 °F, Time 22.0 hour | |
| Compression Set | 35 % | 35 % | ASTM D3995B |
| | @Temperature 70.0 °C, Time 259000 sec | @Temperature 158 °F, Time 72.0 hour | |

| Thermal Properties | Metric | English | Comments |
|-----------------------|---------|---------|------------|
| Vicat Softening Point | 75.0 °C | 167 °F | ASTM D1525 |

| Brittleness Temperature Thermal Properties | 18.4 °C Metric | 65.2 °F English | ASTM D746 Comments |
|---|--------------------|----------------------|-----------------------|
| Flammability, UL94 | HB | HB | |
| | @Thickness 1.00 mm | @Thickness 0.0394 in | |
| | HB | HB | |
| | @Thickness 1.50 mm | @Thickness 0.0591 in | |
| | HB | HB | |
| | @Thickness 3.00 mm | @Thickness 0.118 in | |

| Processing Properties | Metric | English | Comments |
|---------------------------|------------------|------------------|-----------|
| Processing Temperature | 190 - 195 °C | 374 - 383 °F | Injection |
| Rear Barrel Temperature | 165 °C | 329 °F | Injection |
| Middle Barrel Temperature | 180 °C | 356 °F | Injection |
| Front Barrel Temperature | 195 °C | 383 °F | Injection |
| Nozzle Temperature | 195 - 200 °C | 383 - 392 °F | Injection |
| Mold Temperature | 25.0 - 60.0 °C | 77.0 - 140 °F | Injection |
| Injection Velocity | >= 10.0 mm/sec | >= 0.394 in/sec | Injection |
| Drying Temperature | 85.0 °C | 185 °F | Injection |
| Dry Time | 4.00 hour | 4.00 hour | Injection |
| Back Pressure | 0.500 - 1.00 MPa | 72.5 - 145 psi | Injection |
| Clamp Pressure | 40.0 - 70.3 MPa | 5800 - 10200 psi | Injection |
| Screw Speed | 60 - 200 rpm | 60 - 200 rpm | Injection |

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