

Innothane® IE-3075

Polyurethane Thermoset Elastomer

Innovative Polymers, Inc.

Message:

IE-3075 is a rigid polyurethane formulated for room temperature hand-batch or vacuum assisted casting methods. Excellent physical properties can be obtained with a room temperature cure without the utilization of mercury, MOCA or TDI.

| General Information | | | |
|-----------------------------------|--------------------------|-------------------|-------------|
| Features | High Rigidity | | |
| RoHS Compliance | RoHS Compliant | | |
| Appearance | Translucent | | |
| Processing Method | Vacuum Casting | | |
| Physical | Nominal Value | Unit | Test Method |
| Specific Gravity | | | |
| Cured | 1.11 | g/cm ³ | |
| Hardener | 1.11 | g/cm ³ | |
| Base Resin | 1.25 | g/cm ³ | |
| Molding Shrinkage - Flow | 0.20 to 0.40 | % | ASTM D2566 |
| Mechanical | Nominal Value | Unit | Test Method |
| Flexural Modulus | 2690 | MPa | ASTM D790 |
| Flexural Strength | 114 | MPa | ASTM D790 |
| Compressive Modulus | 2070 | MPa | ASTM D695 |
| Impact | Nominal Value | Unit | Test Method |
| Notched Izod Impact | 37 | J/m | ASTM D256 |
| Thermal | Nominal Value | Unit | Test Method |
| Deflection Temperature Under Load | | | ASTM D648 |
| 0.45 MPa, Unannealed | 83.0 | °C | |
| 1.8 MPa, Unannealed | 81.0 | °C | |
| Thermoset | Nominal Value | Unit | Test Method |
| Thermoset Components | | | |
| | Mix Ratio by Volume: 100 | | |
| | | | |
| Hardener | Mix Ratio by Weight: 89 | | |
| | Mix Ratio by Weight: 100 | | |
| | | | |
| Resin | Mix Ratio by Volume: 100 | | |
| Demold Time | 30 to 90 | min | |
| Uncured Properties | Nominal Value | Unit | Test Method |

| | | | |
|-----------------------------|--------------------------------------|------|-------------|
| Viscosity | | | |
| 25°C ¹ | 0.075 | Pa·s | |
| 25°C ² | 0.30 | Pa·s | |
| 25°C ³ | 0.85 | Pa·s | |
| Curing Time ⁴ | 40 | hr | |
| Gel Time | 6.0 to 10 | min | |
| Cured Properties | Nominal Value | Unit | Test Method |
| Shore Hardness (Shore D) | 75 to 85 | | ASTM D2240 |
| Tensile Strength | 68.9 | MPa | ASTM D638 |
| Tensile Elongation at Break | 9.0 | % | ASTM D638 |
| NOTE | | | |
| 1. | Resin | | |
| 2. | Mixed | | |
| 3. | Hardener | | |
| 4. | 24 hours at 77°F + 16 hours at 200°F | | |

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

