

Innothane® IE-72DC

Polyurethane Thermoset Elastomer

Innovative Polymers, Inc.

Message:

IE-72DC is a water-clear, 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. The unique chemistry of IE-72DC imparts excellent optical clarity as well as U.V. stability.

| General Information | | | |
|-----------------------------------|--------------------------|-------|-------------|
| Features | Good UV Resistance | | |
| | High Clarity | | |
| | High Rigidity | | |
| RoHS Compliance | RoHS Compliant | | |
| Appearance | Clear/Transparent | | |
| Processing Method | Vacuum Casting | | |
| Physical | Nominal Value | Unit | Test Method |
| Specific Gravity | | | |
| Hardener | 1.05 | g/cm³ | |
| Cured | 1.10 | g/cm³ | |
| Base Resin | 1.16 | g/cm³ | |
| Molding Shrinkage - Flow | 0.40 | % | ASTM D2566 |
| Mechanical | Nominal Value | Unit | Test Method |
| Flexural Modulus | 1720 | MPa | ASTM D790 |
| Impact | Nominal Value | Unit | Test Method |
| Notched Izod Impact | 27 | J/m | ASTM D256 |
| Thermal | Nominal Value | Unit | Test Method |
| Deflection Temperature Under Load | | | ASTM D648 |
| 0.45 MPa, Unannealed ¹ | 77.0 | °C | |
| 0.45 MPa, Unannealed | 60.0 | °C | |
| Thermoset | Nominal Value | Unit | Test Method |
| Thermoset Components | | | |
| | Mix Ratio by Volume: 55 | | |
| | | | |
| Hardener | Mix Ratio by Weight: 50 | | |
| | Mix Ratio by Weight: 100 | | |
| | | | |
| Resin | Mix Ratio by Volume: 100 | | |

| | | | |
|-----------------------------|--------------------------|------|-------------|
| Demold Time | 120 to 240 | min | |
| Additional Information | Nominal Value | Unit | Test Method |
| Peak Exotherm - 200g mass | 138 | °C | |
| Uncured Properties | Nominal Value | Unit | Test Method |
| Viscosity | | | |
| 25°C ² | 0.90 | Pa·s | |
| 25°C ³ | 1.2 | Pa·s | |
| 25°C ⁴ | 4.0 | Pa·s | |
| Curing Time (25°C) | 24 | hr | |
| Gel Time | 15 to 20 | min | |
| Cured Properties | Nominal Value | Unit | Test Method |
| Shore Hardness (Shore D) | 75 to 85 | | ASTM D2240 |
| Tensile Strength | 55.2 | MPa | ASTM D638 |
| Tensile Elongation at Break | 2.0 | % | ASTM D638 |
| NOTE | | | |
| 1. | 8 hour @ 150°F post-cure | | |
| 2. | Resin | | |
| 3. | Mixed | | |
| 4. | Hardener | | |

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