

EpoxAcast® 690

Epoxy; Epoxide

Smooth-On, Inc

Message:

EpoxAcast® 690 is a clear casting epoxy that is ideal for making clear jewelry/beads or replacement lenses for kit cars and other applications requiring a rigid, clear finished product. EpoxAcast® 690 can be colored with SO-Strong® color tints. EpoxAcast® 690 is also suitable for making clear molds and prototype parts. Castings cure with negligible shrinkage and are very hard and strong. EpoxAcast® 690 is also suitable for encapsulation applications for electronic assemblies where component identification is necessary. Recommended casting thickness maximum; 2 in./5 cm.

| General Information | |
|---------------------|-------------------|
| Features | High Hardness |
| | High Rigidity |
| | High Strength |
| | Low Shrinkage |
| Uses | Jewelry |
| | Lenses |
| Appearance | Clear/Transparent |
| Processing Method | Casting |
| | Encapsulating |

| Physical | Nominal Value | Unit | Test Method |
|--|---------------|--------------------|-------------|
| Specific Gravity | 1.10 | g/cm ³ | ASTM D1475 |
| Specific Volume | 0.903 | cm ³ /g | ASTM D792 |
| Cure Time | 1.0 | day | |
| Hardness | Nominal Value | Unit | Test Method |
| Durometer Hardness (Shore D) | 80 | | ASTM D2240 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Modulus | 3940 | MPa | ASTM D638 |
| Tensile Strength (Break) | 45.7 | MPa | ASTM D638 |
| Tensile Elongation (Break) | 1.8 | % | ASTM D638 |
| Flexural Modulus | 2830 | MPa | ASTM D790 |
| Flexural Strength | 75.7 | MPa | ASTM D790 |
| Compressive Modulus | 629 | MPa | ASTM D695 |
| Compressive Strength | 66.3 | MPa | ASTM D695 |
| Thermal | Nominal Value | Unit | Test Method |
| Deflection Temperature Under Load (0.45 MPa, Unannealed) | 46.1 | °C | ASTM D648 |
| Optical | Nominal Value | | |
| Refractive Index ¹ | 1.565 | | |

| Thermoset | Nominal Value | Unit | Test Method |
|-------------------------|--------------------------|------|-------------|
| Thermoset Components | | | |
| Part A | Mix Ratio by Weight: 100 | | |
| Part B | Mix Ratio by Weight: 30 | | |
| Pot Life | 300 | min | ASTM D2471 |
| Thermoset Mix Viscosity | 200 | cP | ASTM D2393 |
| NOTE | | | |
| 1. | 20°C | | |

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