Pleximid® TT70

Polymethyl Methacrylimide Acrylic

Evonik Industries AG

Message:

Product Profile: PLEXIMID® TT70 is a highly heat distortion-resistant poly(n-methyl methacrylimide) (PMMI). Besides showing the properties common to all PLEXIMID® molding compounds, such as excellent transmission and clarity, very high mechanical strength and rigidity, good weather resistance. PLEXIMID® TT70 has the following specific characteristics: high stability of the optical characteristics at long-lasting thermal load, highest heat deflection temperature under load. Application: PLEXIMID® molding compound is particularly suitable for injection molding of items meant for applications that involve maximum thermal loads. Examples: lenses, light guides, lighting fixtures, covers.

Processing:

PLEXIMID[®] molding compound can be processed on injection molding machines with standard 3-zone general purpose screws for thermoplastics. PLEXIMID[®] is supplied as pellets of uniform size in aluminum-laminated, 25kg polyethylene bags.

| General Information | | | |
|---------------------------------------|-------------------------|----------|-------------|
| Additive | Mold Release | | |
| Features | Good Thermal Stability | | |
| | Good Weather Resistance | | |
| | High Clarity | | |
| | High Heat Resistance | | |
| | High Rigidity | | |
| | High Strength | | |
| | Opticals | | |
| | | | |
| Uses | Lenses | | |
| | Lighting Fixtures | | |
| | Protective Coverings | | |
| | | | |
| Forms | Pellets | | |
| Processing Method | Injection Molding | | |
| Physical | Nominal Value | Unit | Test Method |
| Density | 1.21 | g/cm³ | ISO 1183 |
| Melt Mass-Flow Rate (MFR) (260°C/10.0 | | | |
| kg) | 1.7 | g/10 min | ISO 1133 |
| Water Absorption (23°C, 24 hr) | 6.0 | % | ISO 62 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Modulus | 4000 | MPa | ISO 527-2/1 |
| Tensile Stress (Break) | 80.0 | MPa | ISO 527-2/5 |

| Tensile Strain (Break) | 3.0 | % | ISO 527-2/5 |
|---|---------------|-------|-------------|
| Impact | Nominal Value | Unit | Test Method |
| | | | |
| Charpy Unnotched Impact Strength (23°C) | 20 | kJ/m² | ISO 179/1eU |
| Thermal | Nominal Value | Unit | Test Method |
| Heat Deflection Temperature | | | |
| 0.45 MPa, Unannealed | 158 | °C | ISO 75-2/B |
| 1.8 MPa, Unannealed | 149 | °C | ISO 75-2/A |
| Vicat Softening Temperature | 170 | °C | ISO 306/B50 |
| Flammability | Nominal Value | | Test Method |
| Fire Rating | B2 | | DIN 4102 |
| Optical | Nominal Value | Unit | Test Method |
| Refractive Index | 1.540 | | ISO 489 |
| Transmittance ¹ | 91.0 | % | ISO 13468-2 |
| Injection | Nominal Value | Unit | |
| Drying Temperature | < 150 | °C | |
| Drying Time | 2.0 to 3.0 | hr | |
| Processing (Melt) Temp | 260 to 290 | °C | |
| Mold Temperature | 130 | °C | |
| NOTE | | | |
| 1. | D65 | | |
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