PLEXIMID® TT50

PMMI

Röhm GmbH

Productprofil:

PLEXIMID® TT50 is a highly heat distortion-resistant poly(n-methyl methacrylimide) (PMMI).
Besides showing the properties common to all PLEXIMID® molding compounds, such as

- high heat deflection temperature under load,
- excellent transmission and clarity,
- very high strength and rigidity, as well as
- good weather resistance.

PLEXIMID® TT50 is special in that it is

- listed by AMECA.

Application:

PLEXIMID® molding compound is particularly suitable for injection molding of items meant for applications that involve high heat loads.

Example:

automotive lighting, lenses, fiber optics, luminaire covers, nameplates, sightglasses.

Processing:

PLEXIMID® molding compound can be processed on injection molding machines with standard 3-zone general purpose screws for thermoplastics.

Physical Form / Packaging:

PLEXIMID® is supplied as pellets of uniform size in aluminum-laminated, 25kg polyethylene bags.

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	5	cm³/10min	ISO 1133
Temperature	260	°C	-
Load	10	kg	-

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	4000	MPa	ISO 527
Stress at Break	80	MPa	ISO 527
Strain at Break	3	%	ISO 527
Impact Strength (Charpy), +23°C	20	kJ/m²	ISO 179/1eU

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	132	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	140	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	150	°C	ISO 306

Other Properties	Value	Unit	Test Standard
ISO Data			
Density	1210	kg/m³	ISO 1183

Material Specific Properties	Value	Unit	Test Standard
ISO Data			
Luminous transmittance	91	%	ISO 13468-1, -2

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	100	°C	-
Pre-drying - Time	2 - 3	h	-
Melt temperature	250 - 280	°C	-
Mold temperature	110	°C	-

Characteristics

Processing
Injection Molding

Delivery form
Pellets

Special Characteristics
Light stabilized or stable to light, UV stablized, Heat aging stabilized, Transparent

Applications
Automotive

Injection Molding

PREPROCESSING
Predrying temperature: max. 100 °C
Predrying time in a desiccant-type drier: 2 - 3 h
PROCESSING
Melt temperature: 250 - 280°C
Mold temperature: approx. 110°C

Chemical Media Resistance

Acids

- ✔ Acetic Acid (5% by mass) (23°C)
- ✔ Lactic Acid (10% by mass) (23°C)
- ✔ Sulfuric Acid (38% by mass) (23°C)
- ✔ Sulfuric Acid (5% by mass) (23°C)

Alcohols

- ✔ Isopropyl alcohol (23°C)

Hydrocarbons

- ✔ n-Hexane (23°C)

Mineral oils

- ✔ SAE 10W40 multigrade motor oil (23°C)

Standard Fuels

- ✔ Standard fuel without alcohol (pref. ISO 1817 Liquid C) (23°C)
- ✔ Standard fuel with alcohol (pref. ISO 1817 Liquid 4) (23°C)
- ✔ Diesel fuel (pref. ISO 1817 Liquid F) (23°C)

Other

- ✔ Water (23°C)

Disclaimer

APPLICATION, SUCH AS, BUT NOT LIMITED TO, SAFETY-CRITICAL COMPONENTS OR SYSTEMS.

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- risk class III applications according to EU directive 93/42/EEC
- any bodily implant application for greater than 30 days
- any critical component in any medical device that supports or sustains human life.

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