

Productprofil:

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.

Example:

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.

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	1.7	cm ³ /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/m ²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	1.4	kJ/m ²	ISO 179/1eA

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	149	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	158	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	170	°C	ISO 306

Other Properties	Value	Unit	Test Standard
ISO Data			
Water Absorption	6	%	Sim. to ISO 62
Density	1210	kg/m ³	ISO 1183

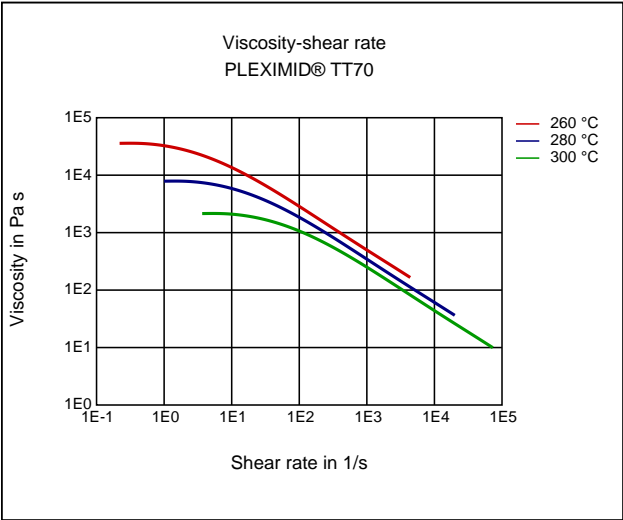
Material Specific Properties	Value	Unit	Test Standard
ISO Data			
Luminous transmittance	91	%	ISO 13468-1, -2

Rheological calculation properties	Value	Unit	Test Standard
ISO Data			
Density of melt	1150	kg/m³	-

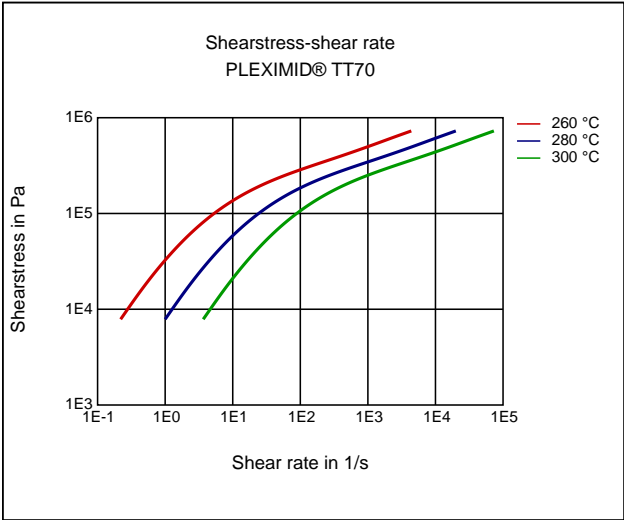
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	120	°C	-
Pre-drying - Time	2 - 3	h	-
Melt temperature	260 - 290	°C	-
Mold temperature	130	°C	-

Diagrams

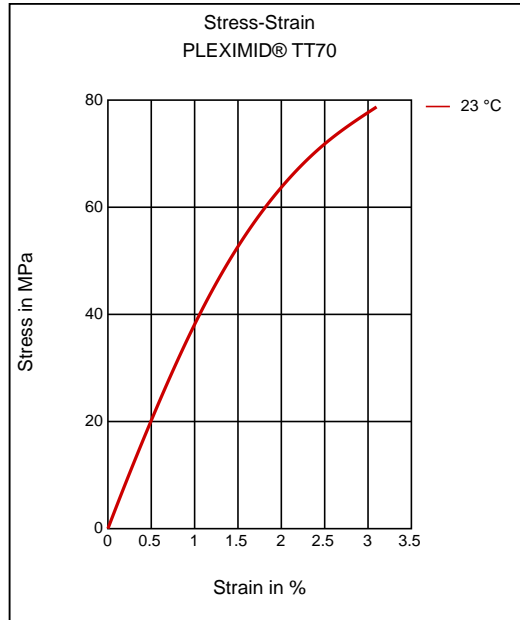
Viscosity-shear rate



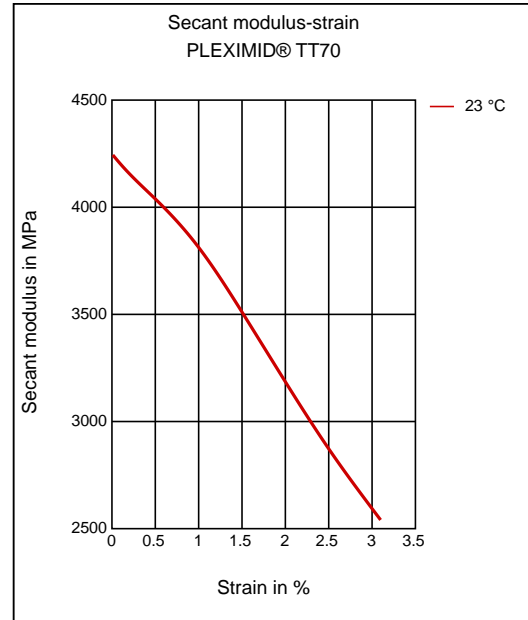
Shearstress-shear rate



Stress-strain



Secant modulus-strain



Characteristics

Processing

Injection Molding

Delivery form

Pellets

Special Characteristics

Light stabilized or stable to light, UV stabilized, Heat aging stabilized, Transparent

Injection Molding

PREPROCESSING

Predrying temperature: max. 120 °C

Predrying time in a desiccant-type drier: 2 - 3 h

PROCESSING

Melt temperature: 260 - 290 °C

Mold temperature: approx. 130 °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

Liability Exclusion

These guide values are measured and provided by the product manufacturer and have been determined on standardised test specimens and can be affected by pigmentation, mould design and processing conditions. M-Base has taken the guide values from the producer's original Technical Data Sheet. **ALBIS AND M-BASE ARE THEREFORE NOT RESPONSIBLE FOR THE ACCURACY OF THE GUIDE VALUES AND CANNOT GIVE ANY WARRANTY WITH REGARD TO THEIR CORRECTNESS.**

Any information given on the chemical and physical characteristics of our products, including, without limitation, technical advice on applications, whether verbally, in writing or by testing the product, is given to the best of our knowledge and in good faith and does not exempt the buyer from carrying out their own investigations and tests in order to ascertain the product's specific suitability for the purpose intended.

The buyer is solely responsible for confirming the suitability of the product for a particular application, its utilization and processing and must observe any applicable laws and government regulations. **NO EXPRESS OR IMPLIED RECOMMENDATION OR WARRANTY IS GIVEN WITH REGARD TO THE SUITABILITY OF THE PRODUCT FOR A PARTICULAR APPLICATION, SUCH AS, BUT NOT LIMITED TO, SAFETY-CRITICAL COMPONENTS OR SYSTEMS.**

Healthcare uses: the supply of any product by ALBIS for any medical, pharmaceutical or diagnostic application is conditional to an assessment by ALBIS in terms of compliance with ALBIS' internal risk management policy – even for products which are in general designated for use in Healthcare applications.

Important: irrespective of product type or designation, ALBIS does not recommend or support the use of any products it supplies which fall into the following medical, pharmaceutical or diagnostic application categories:

- 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.

At all times, our standard terms and conditions of sale apply.