PLEXIGLAS® 7H
PMMA Röhm GmbH

Product Texts

Productprofil:

PLEXIGLAS® 7H is an amorphous thermoplastic molding compound (PMMA).

Typical properties of PLEXIGLAS® molding compounds are:

- good flow
- high mechanical strength, surface hardness and mar resistance
- high light transmission
- excellent weather resistance
- free colorability due to crystal clarity.

Special properties of PLEXIGLAS® 7H are:

- very good mechanical properties
- high heat deflection temperature
- high melt strength
- AMECA listing.

Application:

Used for extruding optical and technical profiles and sheets.

Example:

sheets, tubes, multi-skin sheets, coextrusion of window profiles and similar applications

Processing:

PLEXIGLAS® 7H can be processed on extruders with 3-zone general purpose screws for engineering thermoplastics.

Physical Form / Packaging:

PLEXIGLAS® molding compounds are supplied as pellets of uniform size, packaged in 25kg polyethylene bags or in 500kg boxes with PE lining; other packaging on request.

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
[C] Melt volume-flow rate, MVR	**1.4**	cm³/10min	ISO 1133
Temperature	**230**	°C	-
Load	**3.8**	kg	-
[C] Density of melt	**1060**	kg/m³	-
[C] Thermal conductivity of melt	**0.181**	W/(m K)	-
[C] Spec. heat capacity of melt	**2440**	J/(kg K)	-
[C] Eff. thermal diffusivity	**6.99E-8**	m²/s	-
[C] Ejection temperature	**85**	°C	-

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**3200**	MPa	ISO 527
[C] Stress at break	**76**	MPa	ISO 527
[C] Strain at break	**5.5**	%	ISO 527

[C] Tensile creep modulus, 1h	**2900**	MPa	ISO 899-1
[C] Tensile creep modulus, 1000h	**2300**	MPa	ISO 899-1
[C] Charpy impact strength, +23°C	**20**	kJ/m²	ISO 179/1eU

[C]: CAMPUS

Thermal properties	**Value**	**Unit**	**Test Standard**
ISO Data			
[C] Glass transition temperature, 10°C/min	**112**	°C	ISO 11357-1/-2
[C] Temp. of deflection under load, 1.80 MPa	**95**	°C	ISO 75-1/-2
[C] Temp. of deflection under load, 0.45 MPa	**100**	°C	ISO 75-1/-2
[C] Vicat softening temperature, B	**103**	°C	ISO 306
[C] Coeff. of linear therm. expansion, parallel	**80**	E-6/K	ISO 11359-1/-2
[C] Burning Behav. at 1.5 mm nom. thickn.	**HB**	class	IEC 60695-11-10
Thickness tested	**1.6**	mm	-
Yellow Card available	**yes**	-	-
[C] Oxygen index	**17.2**	%	ISO 4589-1/-2

[C]: CAMPUS

Electrical properties	**Value**	**Unit**	**Test Standard**
ISO Data			
[C] Relative permittivity, 100Hz	**3.7**	-	IEC 62631-2-1
[C] Relative permittivity, 1MHz	**2.8**	-	IEC 62631-2-1
[C] Dissipation factor, 100Hz	**500**	E-4	IEC 62631-2-1
[C] Dissipation factor, 1MHz	**200**	E-4	IEC 62631-2-1
[C] Volume resistivity	**>1E13**	Ohm*m	IEC 62631-3-1
[C] Surface resistivity	**1E13**	Ohm	IEC 62631-3-2
[C] Comparative tracking index	**600**	-	IEC 60112

[C]: CAMPUS

Optical properties	**Value**	**Unit**	**Test Standard**
ISO Data			
[C] Luminous transmittance	**92**	%	ISO 13468-1, -2

[C]: CAMPUS

Other properties	**Value**	**Unit**	**Test Standard**
[C] Water absorption	**1.9**	%	Sim. to ISO 62
[C] Humidity absorption	**0.6**	%	Sim. to ISO 62
[C] Density	**1190**	kg/m³	ISO 1183

[C]: CAMPUS

Material specific properties	**Value**	**Unit**	**Test Standard**
ISO Data			
[C] Viscosity number	**72**	cm³/g	ISO 307, 1157, 1628

[C]: CAMPUS

Test specimen production	**Value**	**Unit**	**Test Standard**
ISO Data			
[C] Processing conditions acc. ISO	**8257**	-	ISO ....-2
[C] Injection Molding, melt temperature	**252**	°C	ISO 294
Injection Molding, mold temperature	**62**	°C	ISO 294
Injection Molding, injection velocity	**195**	mm/s	ISO 294

[C]: CAMPUS

Processing Recommendation Injection Molding	**Value**	**Unit**	**Test Standard**
Pre-drying - Temperature	**93**	°C	-
Pre-drying - Time	**2 - 3**	h	-

Melt temperature	**220 - 260**	°C	-
Mold temperature	**60 - 90**	°C	-

Characteristics

Processing
Injection Molding, Pipe/Tube Extrusion, Profile Extrusion, Sheet Extrusion, Other Extrusion, Thermoforming

Delivery form
Pellets

Special Characteristics
Light stabilized or stable to light, U.V. stabilized or stable to weather, Transparent

Features
Amorphous, Melt Strength

Applications
Building Construction

Regional Availability
North America, Europe, Asia Pacific, South and Central America, Near East/Africa

Other text information

Injection molding
PREPROCESSING
Predrying temperature: max. 93 °C
Predrying time in a desiccant-type drier: 2 - 3 h
PROCESSING
Melt temperature: 220 - 260°C
Mold temperature:60 - 90°C

Profile extrusion
PREPROCESSING
Predrying temperature: max. 93 °C
Predrying time in a desiccant-type drier: 2 - 3 h
PROCESSING
Melt temperature: 220 - 260 °C
Die temperature: 220 - 260 °C

Sheet extrusion
PREPROCESSING
Predrying temperature: max. 93 °C
Predrying time in a desiccant-type drier: 2 - 3 h
PROCESSING
Melt temperature: 220 - 260 °C
Die temperature: 220 - 260 °C