

Product Texts

Productprofil:

PLEXIGLAS® 8N is an amorphous thermoplastic molding compound (PMMA).

Typical properties of PLEXIGLAS® molding compounds are:

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

Special properties of PLEXIGLAS® 8N are:

- optimum mechanical properties
- maximum heat deflection temperature
- good flow / melt viscosity
- AMECA listing.

Application:

Used for injection molding optical and technical items.

Example:

optical waveguides, luminaire covers, automotive lighting, instrument cluster covers, optical lenses, displays, etc.

Processing:

PLEXIGLAS® 8N can be processed on injection molding machines 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	3	cm ³ /10min	ISO 1133
Temperature	230	°C	-
Load	3.8	kg	-
^[C] Density of melt	1060	kg/m ³	-
^[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	m ² /s	-
^[C] Ejection temperature	90	°C	-

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	3300	MPa	ISO 527
^[C] Stress at break	77	MPa	ISO 527
^[C] Strain at break	5.5	%	ISO 527

PLEXIGLAS® 8N

PMMA

Röhm GmbH

^[C] Tensile creep modulus, 1h	2800	MPa	ISO 899-1
^[C] Tensile creep modulus, 1000h	2200	MPa	ISO 899-1
^[C] Charpy impact strength, +23°C	20	kJ/m ²	ISO 179/1eU

[C]: CAMPUS

Thermal properties	Value	Unit	Test Standard
ISO Data			
^[C] Glass transition temperature, 10°C/min	117	°C	ISO 11357-1/-2
^[C] Temp. of deflection under load, 1.80 MPa	98	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	103	°C	ISO 75-1/-2
^[C] Vicat softening temperature, B	108	°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	3.6	-	IEC 62631-2-1
^[C] Relative permittivity, 1MHz	2.7	-	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	2	%	Sim. to ISO 62
^[C] Humidity absorption	0.6	%	Sim. to ISO 62
^[C] Density	1190	kg/m ³	ISO 1183

[C]: CAMPUS

Material specific properties	Value	Unit	Test Standard
ISO Data			
^[C] Viscosity number	53	cm ³ /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	248	°C	ISO 294
Injection Molding, mold temperature	68	°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	98	°C	-
Pre-drying - Time	2 - 3	h	-

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

Characteristics**Processing**

Injection Molding

Features

Amorphous

Delivery form

Pellets

Applications

Automotive

Additives

Release agent

Regional Availability

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

Special Characteristics

Light stabilized or stable to light, U.V. stabilized or stable to weather, Heat stabilized or stable to heat, Transparent

Other text information**Injection molding**

PREPROCESSING

Predrying temperature: max. 98 °C

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

PROCESSING

Melt temperature: 220 - 260°C

Mold temperature: 60 - 90°C