

Technical Data

Product Description

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.

Examples:

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

General

Material Status	• Commercial: Active		
Availability	• Europe		
Features	• Abrasion Resistant • Amorphous • Good Colorability	• Good Flow • High Hardness • High Heat Resistance	• High Light Transmission • High Strength • Weather Resistant
Uses	• Automotive Applications • Displays	• Lenses • Lighting Applications	• Optical Applications
Forms	• Pellets		
Processing Method	• Injection Molding		
Multi-Point Data	• Creep Modulus vs. Time (ISO 11403-1) • Isochronous Stress vs. Strain (ISO 11403-1) • Isothermal Stress vs. Strain (ISO 11403-1)	• Secant Modulus vs. Strain (ISO 11403-1) • Shear Modulus vs. Temperature (ISO 11403-1) • Specific Volume vs Temperature (ISO 11403-2)	• Viscosity vs. Shear Rate (ISO 11403-2)

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.19 g/cm ³	1.19 g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (230°C/3.8 kg)	0.183 in ³ /10min	3.00 cm ³ /10min	ISO 1133
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	479000 psi	3300 MPa	ISO 527-2/1
Tensile Stress (Break)	11200 psi	77.0 MPa	ISO 527-2/5
Tensile Strain (Break)	5.5 %	5.5 %	ISO 527-2/5
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Unnotched Impact Strength 73°F (23°C)	9.5 ft·lb/in ²	20 kJ/m ²	ISO 179/1eU



Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Deflection Temperature			
66 psi (0.45 MPa), Unannealed	217 °F	103 °C	ISO 75-2/B
264 psi (1.8 MPa), Unannealed	208 °F	98.0 °C	ISO 75-2/A
Glass Transition Temperature	243 °F	117 °C	ISO 11357-2
Vicat Softening Temperature	226 °F	108 °C	ISO 306/B50
CLTE - Flow (32 to 122°F (0 to 50°C))	4.4E-5 in/in/°F	8.0E-5 cm/cm/°C	ISO 11359-2
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flammability Classification			IEC 60695-11-10, -20
0.06 in (1.6 mm)	HB	HB	
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Refractive Index	1.490	1.490	ISO 489
Transmittance ²	92.0 %	92.0 %	ISO 13468-2
Haze	< 0.50 %	< 0.50 %	ASTM D1003
Injection	Nominal Value (English)	Nominal Value (SI)	
Drying Temperature	< 208 °F	< 98 °C	
Drying Time	2.0 to 3.0 hr	2.0 to 3.0 hr	
Processing (Melt) Temp	428 to 500 °F	220 to 260 °C	
Mold Temperature	140 to 194 °F	60 to 90 °C	

Notes

¹ Typical properties: these are not to be construed as specifications.

² D65



Where to Buy

Supplier

Evonik Industries AG
Essen, Germany
Telephone: +49-201-177-01
Web: <http://corporate.evonik.com/en/Pages/default.aspx>

Distributor

Plastribution
Telephone: +44-845-345-4560
Web: <http://www.plastribution.co.uk/>
Availability: United Kingdom

TER HELL PLASTIC GMBH

TER HELL PLASTIC is a Pan European distribution company. Contact TER HELL PLASTIC for availability of individual products by country.
Telephone: +49-232-3941-0
Web: <http://www.terhell.de/>
Availability: Germany

Ultrapolymers

Ultrapolymers is a Pan European distribution company. Contact Ultrapolymers for availability of individual products by country.
Telephone: +32-11-57-95-57
Web: <http://www.ultrapolymers.com/>
Availability: France, Romania

