



Product Information

PLEXIGLAS® Solar IM20

Product Profile:

PLEXIGLAS® Solar IM20 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
- Easy to process
- High heat resistance

Special properties of PLEXIGLAS® Solar IM20 are:

- Adjusted transmission characteristics for photo voltaic applications (PV, CPV)
- Increase of power yield and module efficiency
- Prolonging lifetime of cells, lenses or covers.

Application:

Field of use is injection molding of optical and technical parts as well as extrusion of profiles and sheets.

Examples:

Covers for build-in photo voltaic, radial and linear Fresnel lenses for CPV/CSP applications.

Processing:

PLEXIGLAS® Solar IM20 can be processed on injection molding and extrusion machines with 3-zone general purpose screws for engineering thermoplastics.

Physical Form / Packaging:

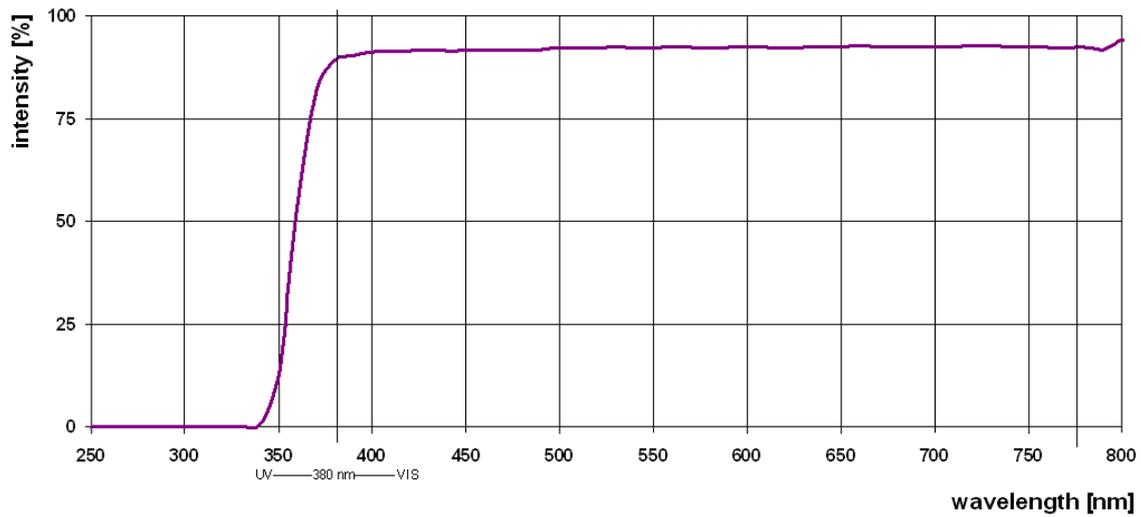
PLEXIGLAS® molding compounds are supplied as pellets of uniform size, packaged in 25kg polyethylene bags or in 500kg boxes with PE lining; other packaging on request.

Properties:

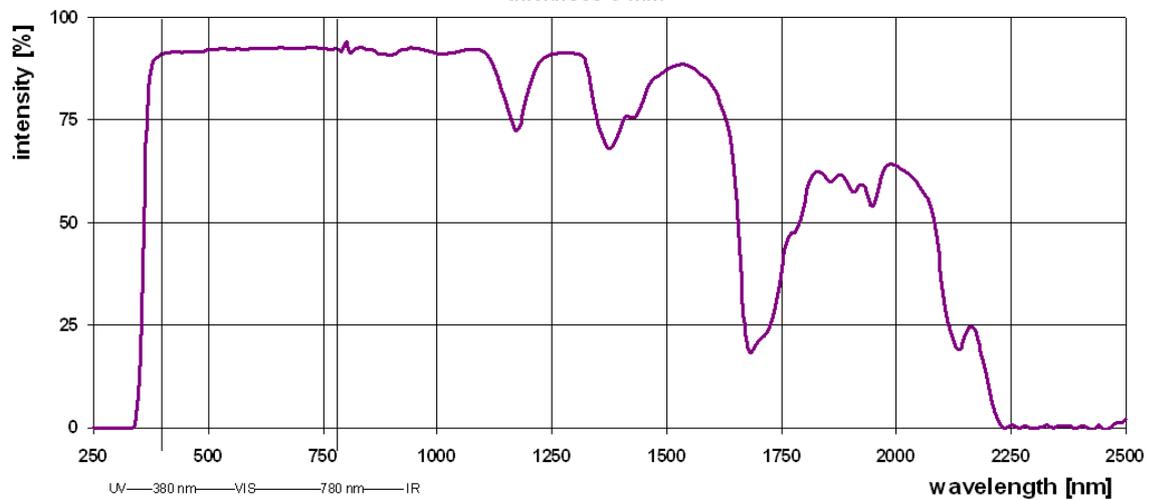
	Parameter	Unit	Standard	PLEXIGLAS® Solar IM20
Mechanical Properties				
Tensile Modulus	1 mm/min	MPa	ISO 527	3300
Stress @ Break	5 mm/min	MPa	ISO 527	77
Strain @ Break	5 mm/min	%	ISO 527	5.5
Charpy Impact Strength	23°C	kJ/m ²	ISO 179/1eU	20
Thermal Properties				
Vicat Softening Temperature	B / 50	°C	ISO 306	108
Glass Transition Temperature		°C	ISO 11357	117
Temp. of Deflection under Load	0.45 MPa	°C	ISO 75	103
Temp. of Deflection under Load	1.8 MPa	°C	ISO 75	98
Coeff. of Linear Therm. Expansion	0 – 50°C	E-5 /°K	ISO 11359	8
Classes of construction product			DIN EN 13501-1	E
Rheological Properties				
Melt Volume Rate, MVR	230°C / 3.8kg	cm ³ /10min	ISO 1133	3
Optical Properties				
	d=3 mm			
Luminous transmittance	D65	%	ISO 13468-2	92
Haze			ASTM D1003	< 0.5
Refractive Index	589nm/23°C		ISO 489	1.49
Other Properties				
Density		g/cm ³	ISO 1183	1.19
Recommended Processing Conditions				
Predrying Temperature		°C		max. 98
Predrying Time in Desiccant-Type Drier		h		2 – 3
Melt Temperature		°C		220 – 260
Mold Temperature (Injection Molding)		°C		60 – 90

All listed technical data are typical values intended for your guidance. They are given without obligation and do not constitute a materials specification.

Transmission in the UV- and VIS- area
PLEXIGLAS® Solar IM20
thickness 3 mm



Transmission in the UV-, VIS- and IR- area
PLEXIGLAS® Solar IM20
thickness 3 mm



Transmission of PLEXIGLAS® Solar IM20 in the area 250 nm to 800 nm and 250 nm to 2500 nm.