

PLEXIGLAS® Heatresist hw55 clear

Product Profile:

PLEXIGLAS® Heatresist hw55 clear is a copolymer based on methyl methacrylate (MMA) with comonomer constituents. Besides showing the familiar properties of standard PLEXIGLAS® molding compound, such as

- high light transmission,
- good flowability,
- high mechanical strength, surface hardness and abrasion resistance, as well as
- excellent weatherability,

PLEXIGLAS® Heatresist hw55 clear offers the additional benefits of

- increased heat deflection temperature under load and
- improved resistance to stress cacking
- optimised inherent color,
- AMECA listing.

Application:

PLEXIGLAS® Heatresist hw55 clear is particularly suitable for injection molding of technical items.

Examples:

lighted keys, luminaire covers, fiber optics.

Processing:

PLEXIGLAS® Heatresist hw55 clear can be processed on injection molding machines with 3-zone general purpose screws for thermoplastics.

Physical Form / Packaging:

PLEXIGLAS® Heatresist hw55 is supplied as pellets of uniform size, packaged in two-ply, 25kg polyethylene bags; other packaging on request.

Properties:

	Parameter	Unit	Standard	PLEXIGLAS® Heatresist hw55 clear
Mechanical Properties				
Tensile Modulus	1 mm/min	MPa	ISO 527	3600
Stress @ Break	5 mm/min	MPa	ISO 527	80
Strain @ Break	5 mm/min	%	ISO 527	3.5
Charpy Impact Strength	23°C	kJ/m ²	ISO 179/1eU	20
Thermal Properties				
Vicat Softening Temperature	B / 50	°C	ISO 306	119
Glass Transition Temperature		°C	IEC 10006	122
Temp. of Deflection under Load	0.45 MPa	°C	ISO 75	109
Temp. of Deflection under Load	1.8 MPa	°C	ISO 75	106
Coeff. of Linear Therm. Expansion	0 – 50°C	E-5 /°K	ISO 11359	7
Flammability UL 94	1.6 mm	Class	IEC 707	HB
Rheological Properties				
Melt Volume Rate, MVR	230°C / 3.8kg	cm ³ /10min	ISO 1133	1.2
Optical Properties				
Luminous transmittance	d=3 mm			
Luminous transmittance	D65	%	ISO 13468-2	90
Refractive Index			ISO 489	1.51
Other Properties				
Density		g/cm ³	ISO 1183	1.19
Water Absorption in Water		%	ISO 62	2.2
Humidity Absorption	23°C / 50%	%	ISO 62	0.6
Recommended Processing Conditions				
Predrying Temperature		°C		max. 109
Predrying Time in Desiccant-Type Drier		h		2 – 3
Melt Temperature		°C		220 – 250
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.

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The Business Unit Performance Polymers of Evonik is a worldwide manufacturer of PMMA molding compounds sold under the PLEXIGLAS® trademark on the European, Asian, African and Australian Continent and under the trademark ACRYLITE® in the Americas.

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