Plexiglas® Heatresist hw55

Polymethyl Methacrylate Acrylic

Evonik Industries AG

Message:

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.

General Information	
UL YellowCard	E65495-247814
Features	Copolymer
	Good Colorability
	Good Flow
	Good Weather Resistance
	High ESCR (Stress Crack Resist.)
	High Hardness
	High Strength
Uses	Fibers
	Optical Applications
	Protective Coverings
Appearance	Clear/Transparent
Forms	Pellets
Processing Method	Injection Molding
Multi-Point Data	Isothermal Stress vs. Strain (ISO 11403-1)
	Secant Modulus vs. Strain (ISO 11403-1)
	Shear Modulus vs. Temperature (ISO 11403-1)
	Viscosity vs. Shear Rate (ISO 11403-2)

Physical	Nominal Value	Unit	Test Method
Density	1.19	g/cm³	ISO 1183

Melt Volume-Flow Rate (MVR) (230°C/3.8 kg)	1.20	cm^3/10min	ISO 1133
Water Absorption			ISO 62
23°C, 24 hr	2.2	%	
Equilibrium, 23°C, 50% RH	0.60	%	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	3600	MPa	ISO 527-2/1
Tensile Stress (Break)	80.0	MPa	ISO 527-2/5
Tensile Strain (Break)	3.5	%	ISO 527-2/5
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Unnotched Impact Strength (23°C)	20	kJ/m^2	ISO 179/1eU
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature			
0.45 MPa, Unannealed	109	°C	ISO 75-2/B
1.8 MPa, Unannealed	106	°C	ISO 75-2/A
Glass Transition Temperature	122	°C	ISO 11357-2
Vicat Softening Temperature	119	°C	ISO 306/B50
CLTE - Flow (0 to 50°C)	7.0E-5	cm/cm/°C	ISO 11359-2
Flammability	**Nominal Value**		**Test Method**
Flame Rating (1.60 mm)	HB		UL 94
Optical	**Nominal Value**	**Unit**	**Test Method**
Refractive Index	1.510		ISO 489
Transmittance [1]	90.0	%	ISO 13468-2
Injection	**Nominal Value**	**Unit**	
Drying Temperature	< 109	°C	
Drying Time	2.0 to 3.0	hr	
Processing (Melt) Temp	220 to 250	°C	
Mold Temperature	60.0 to 90.0	°C	
NOTE			
1.	D65		

Recommended distributors for this material

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