

## Evonik Corporation Plexiglas® hw55 Clear Molding Compound

Category : Polymer , Thermoplastic , Acrylic (PMMA) , Acrylic, General Purpose, Molded

### Material Notes:

Description: PLEXIGLAS® 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, excellent weatherability, PLEXIGLAS® hw55 clear offers the additional benefits of increased heat deflection temperature under load, improved resistance to stress cracking, optimized inherent color. PLEXIGLAS® hw55 clear is particularly suitable for injection molding of technical items. Uses of PLEXIGLAS® hw55 clear: lighted keys, luminaire covers, fiber optics. Information provided by Degussa.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Evonik-Corporation-Plexiglas-hw55-Clear-Molding-Compound.php](http://www.lookpolymers.com/polymer_Evonik-Corporation-Plexiglas-hw55-Clear-Molding-Compound.php)

Physical Properties	Metric	English	Comments
Density	1.19 g/cc	0.0430 lb/in <sup>3</sup>	ISO 1183
Moisture Absorption at Equilibrium	0.60 %	0.60 %	Humidity Absorption (23°C, 50%); ISO 62
Water Absorption at Saturation	2.2 %	2.2 %	Water Absorption in Water; ISO 62
Melt Flow	1.428 g/10 min @Load 3.80 kg, Temperature 230 °C	1.428 g/10 min @Load 8.38 lb, Temperature 446 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	80.0 MPa	11600 psi	5 mm/min; ISO 527
Elongation at Break	3.5 %	3.5 %	5 mm/min; ISO 527
Tensile Modulus	3.60 GPa	522 ksi	1 mm/min; ISO 527
Charpy Impact Unnotched	2.00 J/cm <sup>2</sup> @Temperature 23.0 °C	9.52 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	ISO 179

Thermal Properties	Metric	English	Comments
CTE, linear	70.0 µm/m-°C @Temperature 0.000 - 50.0 °C	38.9 µin/in-°F @Temperature 32.0 - 122 °F	ASTM E831
Deflection Temperature at 0.46 MPa (66 psi)	109 °C	228 °F	ISO 75
Deflection Temperature at 1.8 MPa (264 psi)	106 °C	223 °F	ISO 75

Vicat Softening Point Thermal Properties	119 °C Metric	246 °F English	850: ISO 306 Comments
Glass Transition Temp, Tg	122 °C	252 °F	IEC 10006
Flammability, UL94	HB @Thickness 1.60 mm	HB @Thickness 0.0630 in	IEC 707

Optical Properties	Metric	English	Comments
Refractive Index	1.51	1.51	ISO 489
Transmission, Visible	90 %	90 %	Transmission Factor; DIN 5036

Processing Properties	Metric	English	Comments
Processing Temperature	220 - 250 °C	428 - 482 °F	Cylinder Temperature
Melt Temperature	220 - 250 °C	428 - 482 °F	
Mold Temperature	60.0 - 90.0 °C	140 - 194 °F	
Drying Temperature	<= 109 °C	<= 228 °F	Predrying
Dry Time	2 - 3 hour	2 - 3 hour	Desiccant-type drier

## Contact Songhan Plastic Technology Co.,Ltd.

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