

**TECHNICAL DATA SHEET****PMMA- MH – (POLY METHYL METHACRYLATE (PMMA))****Product Description**

MH is a Poly Methyl Methacrylate general purpose heat resistant grade. It possesses a high heat resistance and it is suitable to use for industrial components.

**Applications:**

- Housewares, rear tail lamps and speedometer for Automotive and optical lenses. Extrusion sheets, pipes and rods.

**Origin:** SAUDI

➤ PETRO RABIGH

<b><u>Optical Property</u></b>	<b><u>Test Method</u></b>	<b><u>Units</u></b>	<b><u>Values</u></b>
<b><u>Properties</u></b>			
Refractive Index	ISO 489	---	1.49
Total Luminous Transmission	ISO 13468-1	%	92
Haze	ISO 14782	%	<0.5
<b><u>Thermal Properties</u></b>			
Coefficient of Linear Thermal Expansion	ISO 11359-2	1/°C	7×10 <sup>-5</sup>
Vicat Softening Temperature (VST)	ISO 306 (B50)	°C	109
Deflection Temperature Under Load 1.80 MPa (annealed)	ISO 75-2 A	°C	101
Melt Flow Rate (MFR) 230°C, 37.3N (3.8kgf)	ISO 1133	g/10min.	2
<b><u>Mechanical Properties</u></b>			
Tensile Strength at break	ISO 527-2	MPa	76
Tensile Strain at break	ISO 527-2	%	4
Flexural Strength	ISO 178	MPa	120
Flexural Modulus	ISO 178	MPa	3100
Charpy Impact Strength (notched)	ISO 179 (1eA)	kJ/m <sup>2</sup>	1.4
Rockwell Hardness Scale M	ISO 2039-2	--	100
<b><u>Electrical Property</u></b>			
Surface Resistivity	IEC 60093	Ω	> 10 <sup>16</sup>
Volume Resistivity	IEC 60093	Ω cm	> 10 <sup>15</sup>
Insulation Resistance	IEC 60167	Ω	> 10 <sup>15</sup>
Dielectric Strength	IEC 60243-1	kV/mm	20
Dielectric Constant (1MHz)	IEC 60250	--	3.1



<b>Other Property</b>			
Specific Gravity	ISO 1183	--	1.19
Mold Shrinkage	ISO 294-4	%	0.2 – 0.6
Water Absorption	ISO 62	%	0.3
Flammability	UL 94	--	HB

**Recommended Injection Molding Conditions - MH**

Pre-Drying Conditions	Temp., °C	80 – 90
	Time/h	4-6
Barrel Temp.	Front °C	240 - 260
	Middle °C	230 - 260
	Back °C	220
Mold Temp.	°C	60 - 85
Injection Pressure	MPa	140 - 160
Hold Pressure	MPa	20 - 80
Back Pressure	Gauge	0.9 - 1,4
Screw Speed	rpm	40 - 60
Cooling time	Sec	20-60

**Recommended Extrusion Molding Conditions - MH**

Screw L/D		30-35
Cylinder Temp °C	Hopper Side	200 - 210
	Center Side	230 – 240
	Die Side	240 - 245
Die Temp, °C		235 - 245

**Recommended Annealing Conditions**

Temp, °C	75 – 85
Time/h	4

➤ **Storage and handling:**

PMMA should be stored in accordance with state and local regulations. In case of spillage, remove pellets immediately to prevent potential slipping hazard. PMMA should be kept away from direct sunlight, water and moisture and be stored at ambient temperature.