

TECHNICAL DATA SHEET

PMMA- EX – (POLY METHYL METHACRYLATE (PMMA))

Product Description

EX is a Poly Methyl Methacrylate general purpose extrusion grade. It possesses excellent extrusion molding properties.

Applications:

- Extrusion sheets for the manufacturing of signage and displays, sound barriers, construction applications and light guide panels for general LED lighting. Profile Extrusion products such as pipes and rods.

Origin: SAUDI

➤ PETRO RABIGH

<u>Optical Property</u>	<u>Test Method</u>	<u>Units</u>	<u>Values</u>
<u>Properties</u>			
Refractive Index	ISO 489	---	1.49
Total Luminous Transmission	ISO 13468-1	%	92
Haze	ISO 14782	%	<0.5
<u>Thermal Properties</u>			
Coefficient of Linear Thermal Expansion	ISO 11359-2	1/°C	7×10 ⁻⁵
Vicat Softening Temperature (VST)	ISO 306 (B50)	°C	104
Deflection Temperature Under Load 1.80 MPa (annealed)	ISO 75-2 A	°C	99
Melt Flow Rate (MFR) 230°C, 37.3N (3.8kgf)	ISO 1133	g/10min.	1.5
<u>Mechanical Properties</u>			
Tensile Strength at break	ISO 527-2	MPa	74
Tensile Strain at break	ISO 527-2	%	5
Flexural Strength	ISO 178	MPa	120
Flexural Modulus	ISO 178	MPa	3100
Charpy Impact Strength (notched)	ISO 179 (1eA)	kJ/m ²	1.4
Rockwell Hardness Scale M	ISO 2039-2	--	100
<u>Electrical Property</u>			
Surface Resistivity	IEC 60093	Ω	> 10 ¹⁶
Volume Resistivity	IEC 60093	Ω cm	> 10 ¹⁵
Insulation Resistance	IEC 60167	Ω	> 10 ⁵
Dielectric Strength	IEC 60243-1	kV/mm	20
Dielectric Constant (1MHz)	IEC 60250	--	3.1



Other Property			
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

➤ **Processing condition:**

Recommended Extrusion Molding Conditions - EX

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.