SABIC® PMMA P15OE

POLYMETHYL METHACRYLATE

DESCRIPTION

SABIC® PMMA P15OE is a Optical extrusion grade for sheets for signage, display, sound barrier, and LED light guide panels, as well as for profiles pipes and rods.

TYPICAL PROPERTY VALUES

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
PHYSICAL PROPERTIES [1]			
Specific Gravity	1.19	g/cm³	ISO 1183
Melt Flow Rate, 230°C/3.8 kg	1.5	g/10 min	ISO 1133
Water Absorption (24hr)	0.3	%	ISO 62
Mold Shrinkage	0.2 - 0.6	%	ISO 294-4
MECHANICAL PROPERTIES [1]			
Hardness			
Hardness, Rockwell M	100	-	ISO 2039-2
Tensile Strength	74	MPa	ISO 527
Elongation	5	%	ISO 527
Flexural Strength	120	MPa	ISO 178
Flexural Modulus	3100	MPa	ISO 178/1A
Charpy notched impact strength @ 23°C	1.4	kJ/m²	ISO 179/1eA
OPTICAL PROPERTIES [1]			
Total Light Transmittance	92	%	ISO 13468
Haze	<0.5	%	ISO 14782
Refractive Index	1.49	-	ISO 489
THERMAL PROPERTIES [1]			
Deflection temperature under load DTUL (@1.8 MPa)	94	°C	ISO 75-1&2
Vicat Softening Temperature			
Vicat Softening Temperature (B50)	104	°C	ISO 306
Coeff. of linear thermal expansion			
Coefficient of Linear Expansion	7E-5	1/°C	ISO 11359-2
ELECTRICAL PROPERTIES			
Surface Resistivity	>10E16	Ω	IEC 60093
Volume Resistivity	>10E15	Ω.cm	IEC 60093
Insulation Resistance	>10E15	Ω	IEC 60167
Dielectric Strength	20	kV/mm	IEC 60243-1
Dielectric Constant			
@ 1MHz	3.1	-	IEC 60250

(1) Typical values; not to be construed as specification limits

CHARACTERISTICS

SABIC® PMMA P15OE has the following:

- Excellent extrusion processability
- High clarity
- Excellent weather resistance.

STORAGE AND HANDLING

Handle in an area equipped with local or general ventilation. Provide facilities for washing eyes and body in case of emergency near the handling area. As preventive measure, make sure all equipment and devices are properly grounded. Store at a location away from heat and fire source and an area not exposed to sunlight. Store in an area where no water leakage occurs and the humidity is low.

PROCESSING CONDITIONS

Extrusion : L/D 30 - 35, barrel 200°C - 245°C, die 235°C - 245°C Injection : pre-drying 80°C - 90°C 4 hours,

Annealing temperature : 75°C - 85°C, 4 hours