

SUMIPEX® EX

Polymethyl Methacrylate Acrylic

Sumitomo Chemical Co., Ltd.

Message:

SUMIPEX general-purpose grades can be classified into two basic categories; good flow and heat resistant types. Each grade is available in pellet form. Bead form is available for some grades

General Information		
UL YellowCard	E54705-245047	E202194-558695
Features	High Heat Resistance	
Uses	Lighting Fixtures	
	Piping	
	Rods	
	Sheet	
UL File Number	E54705B	
Forms	Pellets	
Processing Method	Extrusion	
	Injection Molding	

Physical	Nominal Value	Unit	Test Method
Specific Gravity ¹	1.19	g/cm ³	JIS K7112
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	1.5	g/10 min	JIS K7210
Molding Shrinkage - Flow	0.20 to 0.60	%	ASTM D955
Water Absorption (24 hr)	0.30	%	JIS K7209

Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	100		JIS K7202

Mechanical	Nominal Value	Unit	Test Method
Tensile Strength	74.0	MPa	JIS K7113
Tensile Elongation (Break)	14	%	JIS K7113
Flexural Modulus	3200	MPa	JIS K7203
Flexural Strength	120	MPa	JIS K7203
Flexural Rigidity	8.0	%	JIS K7203
Voltage Resistance ²	20.0	kV/min	JIS K6911

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	1.4	kJ/m ²	JIS K7110

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load ³ (1.8 MPa, Annealed)	99.0	°C	JIS K7207
Vicat Softening Temperature	104	°C	JIS K7206
CLTE - Flow	7.0E-5	cm/cm/°C	ASTM D696

Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+16	ohms	JIS K6911
Volume Resistivity	> 1.0E+15	ohms·cm	JIS K6911
Dielectric Constant	3.10		JIS K6911
Dissipation Factor	0.040		JIS K6911
Insulation Resistance	> 1.0E+15	ohms	JIS K6911
Flammability	Nominal Value	Unit	Test Method
Burning Rate	30	mm/min	ASTM D63
Flame Rating (1.59 mm, All Colors)	HB		UL 94
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.490		JIS K7105
Transmittance ⁴	93.0	%	JIS K7105
Haze	< 0.50	%	JIS K7105
Injection	Nominal Value	Unit	
Drying Temperature	80.0 to 90.0	°C	
Drying Time	4.0 to 6.0	hr	
Rear Temperature	240 to 270	°C	
Middle Temperature	240 to 270	°C	
Front Temperature	240 to 270	°C	
Mold Temperature	60.0 to 85.0	°C	
Injection Pressure	78.5 to 137	MPa	
NOTE			
1.	Method A		
2.	60%, 1kHz		
3.	VST 25±3, 4 hrs		
4.	Method A		

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