

Diakon® Frost 642 22

Polymethyl Methacrylate Acrylic

Lucite International Inc.

Message:

Diakon® Frost 642 22 is a polymethyl methacrylate-acrylic material. This product is available in Europe and is processed by extrusion or injection molding. Diakon® The main characteristics of Frost 642 22 are: flame retardant/rated flame.

General Information			
UL YellowCard	E108947-218752		
Forms	Particle		
Processing Method	Extrusion		
	Injection molding		

Physical	Nominal Value	Unit	Test Method
Density	1.16	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/1.2 kg)	1.6	g/10 min	ISO 1133
Molding Shrinkage	0.40 - 0.80	%	ISO 294-4
Water Absorption (Equilibrium, 23°C, 50% RH)	0.30	%	ISO 62

Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	22		ISO 2039-2
Ball Indentation Hardness (H 961/30)	180	MPa	ISO 2039-1

Mechanical	Nominal Value	Unit	Test Method
Tensile Stress (Yield)	34.0	MPa	ISO 527-2
Tensile Strain (Yield)	23	%	ISO 527-2
Flexural Modulus	1300	MPa	ISO 178

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	5.1	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength	28	kJ/m ²	ISO 179/1eU
Notched Izod Impact	4.5	kJ/m ²	ISO 180/1A

Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	76.0	°C	ISO 75-2/A
Vicat Softening Temperature			
--	95.0	°C	ISO 306/A
--	84.0	°C	ISO 306/B

Flammability	Nominal Value	Unit	Test Method
Flame Rating	HB		UL 94
Glow Wire Ignition Temperature	650	°C	IEC 60695-2-13

Optical	Nominal Value	Unit	Test Method
Transmittance	75.0	%	ASTM D1003

Haze	65	%	ASTM D1003
Injection	Nominal Value	Unit	
Drying Temperature	80.0	°C	
Drying Time	3.0 - 4.0	hr	
Rear Temperature	190 - 240	°C	
Middle Temperature	200 - 260	°C	
Front Temperature	210 - 270	°C	
Nozzle Temperature	210 - 260	°C	
Mold Temperature	50.0 - 70.0	°C	
Injection instructions			
Feed Throat: 50 to 80°C			
Extrusion	Nominal Value	Unit	
Drying Temperature	80.0	°C	
Drying Time	3.0 - 4.0	hr	
Cylinder Zone 1 Temp.	160 - 240	°C	
Cylinder Zone 2 Temp.	180 - 250	°C	
Cylinder Zone 3 Temp.	200 - 250	°C	
Cylinder Zone 4 Temp.	220 - 260	°C	
Cylinder Zone 5 Temp.	220 - 270	°C	
Adapter Temperature	210 - 270	°C	
Die Temperature	210 - 270	°C	
Extrusion instructions			
Feed Throat: 50 to 80°CZone 6: 220 to 270°CZone 7: 210 to 270°CZone 8: 210 to 270°C			

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