

CYROLITE® Protect

PMMA

Evonik CYRO LLC

Processing/Physical Characteristics	Value	Unit	Test Standard
ASTM Data			
Melt Flow Index, MFI	10	g/10min	ASTM D 1238
Temperature	230	°C	-
Load	5	kg	-
Mold Shrinkage, MD	0.0055	mm/mm	ASTM D 955

Mechanical properties	Value	Unit	Test Standard
ASTM Data			
Tensile Modulus	2100	MPa	ASTM D 638
Tensile Strength	47.2	MPa	ASTM D 638
Elongation at Yield	3	%	ASTM D 638
Elongation at Break	8	%	ASTM D 638
Flexural Modulus	2200	MPa	ASTM D 790
Flexural Strength	70.2	MPa	ASTM D 790
Rockwell Hardness	M 40	-	ASTM D 785
Izod Impact notched, 1/4 in	64	J/m	ASTM D 256

Thermal properties	Value	Unit	Test Standard
ASTM Data			
UL 94 Flame rating	HB	-	UL 94
Coefficient of Thermal Expansion, MD	92.5	E-6/K	ASTM D 696
Vicat Temperature	100	°C	ASTM D 1525

Optical properties	Value	Unit	Test Standard
ASTM Data			
Haze	48	%	ASTM D 1003
Light Transmittance	40	%	ASTM D 1003

Other properties	Value	Unit	Test Standard
Water Absorption, Equilibrium	0.3	%	ASTM D 570
Density	1110	kg/m ³	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	79	°C	-
Pre-drying - Time	3 - 4	h	-
Melt temperature	232 - 249	°C	-
Mold temperature	50 - 82	°C	-
Zone 1	193 - 235	°C	-
Zone 2	204 - 243	°C	-
Zone 3	204 - 243	°C	-
Nozzle temperature	204 - 243	°C	-
Injection pressure	41 - 103	MPa	-
Back pressure	0 - 0.69	MPa	-

Characteristics**Processing**

Injection Molding

Special Characteristics

Transparent

Chemical Resistance

General Chemical Resistance, Radiation Resistance

Certifications

Food contact, Food approval FDA 21 CFR, Medical Grade, US Pharmacopeia Class VI Approved

Applications

Medical

Regional Availability

North America