

CYROLITE® MD H12

PMMA

Evonik CYRO LLC

Processing/Physical Characteristics	Value	Unit	Test Standard
ASTM Data			
Melt Flow Index, MFI	7	g/10min	ASTM D 1238
Temperature	230	°C	-
Load	3.8	kg	-
Mold Shrinkage, MD	0.005	mm/mm	ASTM D 955

Mechanical properties	Value	Unit	Test Standard
ASTM Data			
Tensile Modulus	3200	MPa	ASTM D 638
Tensile Strength	65.5	MPa	ASTM D 638
Elongation at Yield	5	%	ASTM D 638
Elongation at Break	5	%	ASTM D 638
Flexural Modulus	3400	MPa	ASTM D 790
Flexural Strength	117	MPa	ASTM D 790
Rockwell Hardness	M 94	-	ASTM D 785
Izod Impact notched, 1/4 in	19	J/m	ASTM D 256

Thermal properties	Value	Unit	Test Standard
ASTM Data			
Coefficient of Thermal Expansion, MD	72	E-6/K	ASTM D 696
Vicat Temperature	105	°C	ASTM D 1525

Optical properties	Value	Unit	Test Standard
ASTM Data			
Haze	1	%	ASTM D 1003
Light Transmittance	92	%	ASTM D 1003

Other properties	Value	Unit	Test Standard
Water Absorption, Equilibrium	0.3	%	ASTM D 570
Density	1190	kg/m ³	ASTM D 792
Bulk Density	660	kg/m ³	-

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	77	°C	-
Pre-drying - Time	3 - 4	h	-
Melt temperature	221 - 249	°C	-
Mold temperature	32 - 79	°C	-
Zone 1	221 - 249	°C	-
Zone 2	221 - 249	°C	-
Zone 3	221 - 249	°C	-
Nozzle temperature	221 - 249	°C	-
Injection pressure	41 - 103	MPa	-
Back pressure	0.17 - 0.69	MPa	-

Characteristics**Processing**

Injection Molding

Special Characteristics

Transparent

Features

Amorphous, Light Guiding

Certifications

Food contact, Food approval FDA 21 CFR, Medical Grade, Biocompatibility ISO 10993, US Pharmacopeia Class VI Approved

Applications

Medical

Chemical Resistance

General Chemical Resistance, Radiation Resistance

Regional Availability

North America