CYROLITE® G-20

Polymethyl Methacrylate Acrylic

Evonik Cyro LLC

Message:

CYROLITE G-20 compound is an impact-modified acrylic-based multipolymer for molding and extrusion of medical applications.
Typical properties of CYROLITE G-20 compound are:
excellent chemical resistance to fats and oils
excellent bonding and welding capabilities
excellent bonding to PVC tubing
good impact strength
good light transmission
good heat resistance
good resistance to EtO, gamma and E-beam sterilization
Used for injection molding and extrusion of medical devices, medical packaging, as well as food packaging, toys and appliance parts.

General Information	
UL YellowCard	E54671-244559
Additive	Impact Modifier
Features	Bondability
	E-beam Sterilizable
	Ethylene Oxide Sterilizable
	Good Chemical Resistance
	Good Impact Resistance
	High Clarity
	Impact Modified
	Medium Heat Resistance
	Radiation Sterilizable
	Weldable
Uses	Appliance Components
	Connectors
	Food Packaging
	Medical Packaging
	Medical/Healthcare Applications
	Toys
	Valves/Valve Parts
Agency Ratings	EC 1907/2006 (REACH)
	FDA 21 CFR 177.1010
	USP Class VI
Appearance	Clear/Transparent
	Colors Available

Forms	Pellets
Processing Method	Extrusion Injection Molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.11	g/cm³	ASTM D792
Apparent Density	0.65	g/cm³	ASTM D1895
Melt Mass-Flow Rate (MFR) (230°C/5.0 kg)	2.6	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.40 to 0.70	%	ASTM D955
Water Absorption (24 hr)	0.30	%	ASTM D570
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	39		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	2210	MPa	ASTM D638
Tensile Strength (Yield)	46.9	MPa	ASTM D638
Tensile Elongation			ASTM D638
Yield	4.0	%	
Break	9.5	%	
Flexural Modulus	2340	MPa	ASTM D790
Flexural Strength (Yield)	72.4	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact			ASTM D256
0°C, 6.35 mm	59	J/m	
23°C, 6.35 mm	100	J/m	
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (1.8 MPa, Annealed)	85.6	°C	ASTM D648
Vicat Softening Temperature	101	°C	ASTM D1525
CLTE - Flow (0 to 156°C)	9.3E-5	cm/cm/°C	ASTM D696
Optical	**Nominal Value**	**Unit**	**Test Method**
Transmittance (3200 µm)	89.0	%	ASTM D1003
Haze (81.3 µm)	5.0	%	ASTM D1003
Yellowness Index (3.20 mm)	-0.30	YI	Internal Method
Injection	**Nominal Value**	**Unit**	
Drying Temperature	79.4	°C	
Drying Time	3.0 to 4.0	hr	
Processing (Melt) Temp	204 to 246	°C	
Mold Temperature	48.9 to 82.2	°C	

Recommended distributors for this material

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