CYROLITE® GS-90

Polymethyl Methacrylate Acrylic

Evonik Cyro LLC

Message:

CYROLITE GS-90 compound is an impact-modified acrylic-based multipolymer for molding and extrusion of medical applications.
Typical properties of CYROLITE® acrylic-based multipolymer compounds 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 resistance to EtO, gamma and E-beam sterilization
The special properties of CYROLITE GS-90 compound are:
superior gamma sterilization color stability
excellent melt flow rate
very good transmission and clarity
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Used for injection molding and extrusion of medical devices, medical packaging, as well as toys and appliance parts.

General Information	
UL YellowCard	E54671-631710
Additive	Impact Modifier
Features	Bondability
	E-beam Sterilizable
	Ethylene Oxide Sterilizable
	Good Chemical Resistance
	Good Color Stability
	Good Impact Resistance
	High Clarity
	High Flow
	Impact Modified
	Radiation Sterilizable
	Weldable
Uses	Appliance Components
	Medical/Healthcare Applications
	Toys
	Valves/Valve Parts
Agency Ratings	EC 1907/2006 (REACH)
	FDA 21 CFR 176.170
	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)	6.5	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.40 to 0.60	%	ASTM D955
Water Absorption (Saturation)	0.30	%	ASTM D570
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	30		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	2960	MPa	ASTM D638
Tensile Strength	43.4	MPa	ASTM D638
Tensile Elongation			ASTM D638
Yield	3.6	%	
Break	6.7	%	
Flexural Modulus	2280	MPa	ASTM D790
Flexural Strength	74.5	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact			ASTM D256
0°C, 6.35 mm	43	J/m	
23°C, 6.35 mm	110	J/m	
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (1.8 MPa, Annealed, 6.35 mm)	72.8	°C	ASTM D648
Vicat Softening Temperature	98.9	°C	ASTM D1525
CLTE - Flow (0 to 100°C)	7.2E-5	cm/cm/°C	ASTM D696
Optical	**Nominal Value**	**Unit**	**Test Method**
Transmittance (3200 µm)	89.0	%	ASTM D1003
Haze (3200 µm)	3.0	%	ASTM D1003
Yellowness Index (3.20 mm)	-0.30	YI	Internal Method
Injection	**Nominal Value**	**Unit**	
Drying Temperature	71.1	°C	
Drying Time	3.0 to 4.0	hr	
Processing (Melt) Temp	210 to 232	°C	
Mold Temperature	48.9 to 82.2	°C	

Recommended distributors for this material

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