+135-3858-6433 (GuangDong)
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CYROLITE®
ADVANCED
MEDICAL ACRYLICS

PRODUCT INFORMATION

CYROLITE® GS-90

Product Profile:

CYROLITE® GS-90 is a PMMA-based copolymer for injection molding and extrusion of medical applications.

Typical properties of CYROLITE® acrylic-based copolymer compounds are:

- High Light Transmittance with little haze
- 5 times the impact resistance of unmodified acrylics
- Resistant to body fluids and many chemicals
- Excellent bonding to PVC tubing
- Can be thermal bonded, ultrasonic and laser welded
- Good heat resistance
- Resistance to EtO, gamma and E-beam sterilization

The special properties of CYROLITE® GS-90 are:

- Superior gamma sterilization color stability
- Excellent melt flow rate
- Superior transmission and clarity

Application:

Used for injection molding and extrusion of medical device and diagnostics industries.

Examples:

Y-Sites, Luer Locks, Needle Hubs, Connectors, Check Valves and Drip Chambers.

Processing:

CYROLITE® GS-90 can be processed in injection molding machines and extrusion lines with 3- zone general purpose screws.

Physical Form / Packaging:

Available in 1500 lb. gaylord boxes; other packaging available on request.

Regulatory and compliance requirements:

Meets requirements of the United States Pharmacopeia Class VI in colorless (000) only; ISO 10993-1 in colorless (000) only and FDA for food contact for all use conditions up to and including hot filled or pasteurized above 150 degrees F (e.g. Condition 21 CFR 176.170) for all food types except those containing more than 8% alcohol.

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Properties:

	Parameter	Unit	ASTM-Standard	CYROLITE® GS-90
Mechanical Properties				Typical Value
Tensile Strength		psi [MPa]	D 638	6800 [46.9]
Tensile Modulus		x10⁶ psi [GPa]	D 638	0.32 [2.2]
Tensile Elongation @ Yield		%	D 638	3.6
Tensile Elongation @ Break		%	D 638	6.7
Flexural Strength		psi [MPa]	D 790	10800 [74.5]
Flexural Modulus		x10⁶ psi [GPa]	D 790	0.33 [2.3]
Notched Izod	¼" bar @23°C	ft-lb/in [J/m]	D 256	2.0 [107]
Notched Izod	¼" bar @0°C	ft-lb/in [J/m]	D 256	0.8 [43]
Rockwell Hardness		M Scale	D 785	30
Thermal Properties				
Vicat Softening Point	50N, 50°C/h	°F [°C]	D 1525	210 [99]
Deflection Temperature, Annealed	1.8MPa, 0.250"	°F [°C]	D 648	163 [73]
Coeff. of Linear Therm. Expansion	32 - 312ºF	1/F	D 696	0.00004
Coeff. of Linear Therm. Expansion	0 - 100°C	1/C	D 696	0.000095
Rheological Properties				
Melt Flow Rate	230°C & 5.0 kg	g/10min	D 1238	6.5
Optical Properties	d = 3.2 mm			
Light Transmission		%	D 1003	89
Haze		%	D 1003	3.0
Yellowness Index			E 313	-0.3
Other Properties				
Specific Gravity			D 792	1.11
Water Absorption		% Max	D 570	0.3
Mold Shrinkage		in/in, mm/mm	D 955	0.004 - 0.006
Bulk Density		g/cc	D 1895	0.65

All listed technical data are typical values intended for your guidance. They are given without obligation and do not constitute a materials specification.

Certified to ISO 9001:2015, ISO 14001:2015 and IATF 16949:2016.

RÖHM