

## PRODUCT INFORMATION

# CYROLITE® G-20

### Product Profile:

CYROLITE® G-20 is a PMMA-based copolymer for injection molding and extrusion of medical applications.

Typical properties of CYROLITE® G-20 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

### Application:

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

### Examples:

Respiratory Device Components, Blood Filter Housings, IV Components

### Processing:

CYROLITE® G-20 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.

**Properties:**

	Parameter	Unit	ASTM-Standard	CYROLITE® G-20
<b>Mechanical Properties</b>				<b>Typical Value</b>
Tensile Strength		psi [MPa]	D 638	6800 [46.9]
Tensile Modulus		x10 <sup>6</sup> psi [GPa]	D 638	0.32 [2.2]
Tensile Elongation @ Yield		%	D 638	4.0
Tensile Elongation @ Break		%	D 638	9.5
Flexural Strength		psi [MPa]	D 790	10500 [72.4]
Flexural Modulus		x10 <sup>6</sup> psi [GPa]	D 790	0.34 [2.3]
Notched Izod	¼" bar @23°C	ft-lb/in [J/m]	D 256	1.9 [101]
Notched Izod	¼" bar @0°C	ft-lb/in [J/m]	D 256	1.1 [59]
Rockwell Hardness		M Scale	D 785	39
<b>Thermal Properties</b>				
Vicat Softening Point	50N, 50°C/h	°F [°C]	D 1525	214 [101]
Deflection Temperature, Annealed	1.8MPa, 0.250"	°F [°C]	D 648	186 [86]
Coeff. of Linear Therm. Expansion	32 - 312°F	1/F	D 696	0.0000514
Coeff. of Linear Therm. Expansion	0 - 100°C	1/C	D 696	0.0000925
<b>Rheological Properties</b>				
Melt Flow Rate	230°C & 5.0 kg	g/10min	D 1238	2.6
<b>Optical Properties</b>	d = 3.2 mm			
Light Transmission		%	D 1003	89
Haze		%	D 1003	5.0
Yellowness Index			Cyro TM	-0.3
<b>Other Properties</b>				
Specific Gravity			D 792	1.11
Water Absorption		% Max	D 570	0.3
Mold Shrinkage		in/in, mm/mm	D 955	0.004 - 0.007
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**