

## 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 001 tint only; ISO 10993-1 in 001 tint 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 Typical Value
<b>Mechanical Properties</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 @23°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.

This information and all further technical advice is based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used.

ACRYLITE, ACRYMID, CYROLITE, CYREX, CYRO, Vu-Stat and XT polymer are registered trademarks of Roehm America LLC. Roehm is a worldwide manufacturer of PMMA products sold under the ACRYLITE® trademark in the Americas and under the PLEXIGLAS® trademark in the European, Asian, African and Australian continents. ©2017 Roehm America LLC. All rights reserved

Roehm America LLC • 299 Jefferson Road • Parsippany NJ 07054 • USA  
[www.cyrolite.com](http://www.cyrolite.com)  
[www.roehm.com](http://www.roehm.com)

Ref. No.: MC179 A1142

**RÖHM**