

## 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 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	Standard	CYROLITE® GS-90
<b>Mechanical Properties</b>				
Tensile Modulus	1 mm/min	MPa	ISO 527	2300
Yield Stress	50 mm/min	MPa	ISO 527	46
Yield Strain	50 mm/min	%	ISO 527	3,8
Nominal Strain @ Break		%	ISO 527	14
Charpy Notched Impact Strength	23°C	kJ/m²	ISO 179/1	11
<b>Thermal Properties</b>				
Vicat Softening Temperature	B / 50	°C	ISO 306	95
Classes of construction product			DIN EN 13501-1	HB
<b>Rheological Properties</b>				
Melt Volume Rate, MVR	230°C & 3,8kg	cm³/10min	ISO 1133	3
<b>Optical Properties</b>				
	d=3 mm			
Luminous transmittance	D65	%	ISO 13468-2	89
Haze		%	ASTM D1003	3,0
Refractive Index	589nm/23°C		ISO 489	1,52
<b>Other Properties</b>				
Density		g/cm³	ISO 1183	1.11

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.

Röhm is a worldwide manufacturer of PMMA products sold under the PLEXIGLAS® trademark on the European, Asian, African and Australian continents and under the ACRYLITE® trademark in the Americas.

® = registered trademark

PLEXIGLAS and PLEXIMID are registered trademarks of Röhm GmbH.

Röhm GmbH • Darmstadt • Germany  
plexiglas.polymers@roehm.com  
www.cyrolite.com

Ref. No.: MC181 A1142

