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

PRODUCT INFORMATION

CYROLITE® MD H15

Product Profile:

CYROLITE® MD H15 acrylic polymer is an amorphous thermoplastic molding compound based on polymethyl methacrylate (PMMA) for the medical diagnostic industry.

Typical properties of CYROLITE® MD acrylic polymers are:

- Exceptional ultra-violet light transmittance
- Superior optical clarity
- Maximum flow characteristics
- Excellent dimensional stability
- Outstanding scratch resistance
- Total cost-of-use advantage over glass

The special properties of CYROLITE® MD H15 polymer are:

- High heat deflection temperature
- High tensile properties
- High melt strength

Application:

Used for injection molding of medical devices requiring UV spectroscopy for fluid evaluation.

Examples:

Well Plates, Diagnostic Test Packs, Microfluidics, and Crystallography Trays.

Processing:

CYROLITE® MD H15 polymer 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® MD H15
Mechanical Properties				Typical Value
Tensile Strength		psi [MPa]	D 638	9800 [67.6]
Tensile Modulus		x10⁶ psi [GPa]	D 638	0.47 [3.2]
Tensile Elongation @ Yield		%	D 638	4 - 6
Tensile Elongation @ Break		%	D 638	4 - 6
Flexural Strength		psi [MPa]	D 790	17000 [117.2]
Flexural Modulus		x10⁶ psi [GPa]	D 790	0.49 [3.4]
Notched Izod	¼" bar @23°C	ft-lb/in [J/m]	D 256	0.36 [19]
Rockwell Hardness		M Scale	D 785	95
Thermal Properties				
Vicat Softening Point	50N, 50°C/h	°F [°C]	D 1525	221 [105]
Deflection Temperature, Annealed	1.8MPa, 0.250"	°F [°C]	D 648	203 [96]
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	0.000072
Rheological Properties				
Melt Flow Rate	230°C & 3.8 kg	g/10min	D 1238	2.2
Optical Properties	d = 3.2 mm			
Light Transmission		%	D 1003	92
UV Transmittance	340 nm	%	D 1003	min. 87.7
Haze		%	D 1003	<1
Yellowness Index			E 313	<1
Other Properties				
Specific Gravity			D 792	1.19
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	0.66

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

RÖHM