

PRODUCT INFORMATION

CYROLITE® MD zk6

Product Profile:

CYROLITE® MD zk6 acrylic polymer is an amorphous, impact modified thermoplastic injection molding and extrusion compound based on polymethyl methacrylate (PMMA) for the medical industry.

Typical properties of CYROLITE® MD zk6 acrylic polymers are:

- High impact/ break resistance and strength
- Medium heat resistance
- Lower melt flow rate applications
- High light transmission with little haze
- 3 times the impact resistance of unmodified acrylics
- Excellent dimensional stability
- Excellent bonding to PVC tubing
- Can be thermal bonded, ultrasonic and laser welded
- Improved tensile elongation

The special Properties of CYROLITE® MD zk6 polymer are:

- High impact/ break resistance and strength
- Medium heat resistance
- Lower melt flow rate applications

Application:

Used for injection molding of medical devices and diagnostics industries.

Examples:

Cassettes, Test Packs, Filter Housings, Lenses, Microfluidics, Guard Clips, Luers, Luer Locks, Tube Connectors, IV Catheter Hubs, Y Sites.

Processing:

CYROLITE® MD zk6 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.

Properties:

	Parameter	Unit	ASTM-Standard	CYROLITE® MD zk6
Mechanical Properties				Typical Value
Tensile Strength		psi [MPa]	D 638	6300 [43.4]
Tensile Modulus		x10 ⁶ psi [GPa]	D 638	0.22 [1.5]
Tensile Elongation @ Yield		%	D 638	5
Tensile Elongation @ Break		%	D 638	55
Flexural Strength		psi [MPa]	D 790	8600 [59.3]
Flexural Modulus		x10 ⁶ psi [GPa]	D 790	0.22 [1.5]
Notched Izod	¼" bar @23°C	ft-lb/in [J/m]	D 256	1.1 [58.1]
Notched Izod	¼" bar @0°C	ft-lb/in [J/m]	D 256	0.70 [36.8]
Rockwell Hardness		M Scale	D 785	40
Thermal Properties				
Vicat Softening Point	50N, 50°C/h	°F [°C]	D 1525	201 [94]
Deflection Temperature, Annealed	1.8MPa, 0.250"	°F [°C]	D 648	194 [90]
Coeff. of Linear Therm. Expansion	32 - 312°F	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	1.7
Optical Properties	d = 3.2 mm			
Light Transmission		%	D 1003	91.5
Haze		%	D 1003	1
Yellowness Index			E 313	0.3
Other Properties				
Specific Gravity			D 792	1.16
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	0.71

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

RÖHM