

Product Information

Page 1 of 2

ACRYLITE PLUS® ZK-M impact acrylic polymer

Product Profile:

ACRYLITE PLUS® ZK-M impact acrylic polymer is an amorphous, impact-modified thermoplastic molding and extrusion compound based on polymethyl methacrylate (PMMA).

Typical properties of ACRYLITE PLUS® impact acrylic polymers are:

- high weather resistance
- high light transmission
- improved resistance to stress cracking
- good melt flow rate
- easy to color

The special properties of ACRYLITE PLUS ZK-M polymer are:

- medium impact/break resistance and strength
- low melt flow rate
- high heat resistance
- AMECA listed as ZKM (x)
- FDA food contact use

Application:

Used for injection molded parts.

Examples:

Automotive tail light lenses, instrument panels, light covers, appliance housings, appliance lenses and housewares.

Processing:

ACRYLITE PLUS ZK-M polymer can be processed in injection molding machines and extrusion lines with 3- zone general purpose screws.

Packaging:

Available in 1500 lb. gaylord boxes; other packaging available on request.

Properties:

	Parameter	Unit	ASTM-Standard	ACRYLITE PLUS® ZK-M polymer
Mechanical Properties				Typical Value
Tensile Strength		psi [MPa]	D 638	8500 [58.6]
Tensile Modulus		x10 ⁶ psi [GPa]	D 638	0.32 [2.2]
Tensile Elongation @ Yield		%	D 638	5
Tensile Elongation @ Break		%	D 638	30
Flexural Strength		psi [MPa]	D 790	13000 [89.6]
Flexural Modulus		x10 ⁶ psi [GPa]	D 790	0.32 [2.2]
Notched Izod	¼" bar @23°C	ft-lb/in [J/m]	D 256	0.85 [44.9]
Notched Izod	¼" bar @0°C	ft-lb/in [J/m]	D 256	0.50 [26.3]
Rockwell Hardness		M Scale	D 785	68
Thermal Properties				
Vicat Softening Point		°F [°C]	D 1525	210 [99]
Deflection Temperature, Annealed	1.8MPa, 0.250"	°F [°C]	D 648	196 [91]
Coeff. of Linear Therm. Expansion	32 – 312°F	in/ in/°F	D 696	0.00004
Coeff. of Linear Therm. Expansion	0 – 100°C	mm/mm/°C	D 696	0.000072
Rheological Properties				
Melt Flow Rate	230°C & 3.8 kg	g/10min	D 1238	3.5
Optical Properties				d = 3.2 mm
Light Transmission		%	D 1003	91.5
Haze		%	D 1003	1
Yellowness Index			D 1925	0.3
Other Properties				
Specific Gravity			D 792	1.18
Water Absorption		% Max	D 570	0.3
Mold Shrinkage		in/in, mm/mm	D 955	0.003 – 0.006
Bulk Density		g/cc	D 1895	0.71
Recommended processing conditions				
Predrying Temperature		°F [°C]		180 [82]
Predrying Time		hour		3 – 4
Melt Temperature		°F [°C]		450 – 480 [232 – 250]
Cylinder Temperature		°F [°C]		450 – 480 [232 – 250]
Mold Temperature		°F [°C]		110 – 180 [49 – 82]

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

This information and all technical and other advice are based on Evonik Cyro's present knowledge and experience. However, Evonik Cyro assumes no liability for such information or advice, including the extent to which such information or advice may relate to third party intellectual property rights. Evonik Cyro reserves the right to make any changes to information or advice at any time, without prior or subsequent notice. EVONIK CYRO DISCLAIMS ALL REPRESENTATIONS AND WARRANTIES, WHETHER EXPRESS OR IMPLIED, AND SHALL HAVE NO LIABILITY FOR, MERCHANTABILITY OF THE PRODUCT OR ITS FITNESS FOR A PARTICULAR PURPOSE (EVEN IF EVONIK IS AWARE OF SUCH PURPOSE), OR OTHERWISE. EVONIK SHALL NOT BE RESPONSIBLE FOR CONSEQUENTIAL, INDIRECT OR INCIDENTAL DAMAGES (INCLUDING LOSS OF PROFITS) OF ANY KIND. It is the customer's sole responsibility to arrange for inspection and testing of all products by qualified experts. Reference to trade names used by other companies is neither a recommendation nor an endorsement of the corresponding product, and does not imply that similar products could not be used. ACRYLITE, ACRYLITE PLUS, ACRYMID, CYROLITE, CYREX, CYRO, CYROVU, Vu-Stat and XT polymer are registered trademarks of Evonik Cyro LLC. Evonik's Business Unit Performance Polymers is a worldwide manufacturer of PMMA molding compounds sold under the trademark ACRYLITE® in the Americas and under the PLEXIGLAS® trademark everywhere outside of the Americas. ® = registered trademark

Evonik Cyro LLC 379 Interpace Parkway, Parsippany, NJ 07054 USA
 Phone: 800-631-5384 Email: cyro.polymer@evonik.com www.cyro.com
 Technical Support: visit the TechKnowlogy Center at cyro.custhelp.com

