

Product Information

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CYREX® 953 acrylic-polycarbonate alloy

Product Profile:

CYREX 953 alloy is an opaque, acrylic-polycarbonate alloy with an impact strength that is higher than polycarbonate.

Typical properties of CYREX® acrylic-polycarbonate alloys are:

- outstanding impact strength and toughness
- excellent processing characteristics
- very good chemical resistance
- good heat resistance

The special properties of CYREX 953 alloy are:

- high impact strength at cold temperature
- high melt flow rate

Application:

Used for injection molding and extrusion of both thin and thick wall applications.

Examples:

Portable phone housings, pager housings, appliances, toys, furniture, automotive components, protective casings, extruded and thermoformed sheet.

Processing:

CYREX 953 alloy 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	CYREX® 953 alloy
Mechanical Properties				Typical Value
Tensile Strength		psi [MPa]	D 638	7860 [54.2]
Tensile Modulus		x10 ⁶ psi [GPa]	D 638	0.30 [2.1]
Tensile Elongation @ Yield		%	D 638	4.2
Tensile Elongation @ Break		%	D 638	88
Flexural Strength		psi [MPa]	D 790	12500 [86.2]
Flexural Modulus		x10 ⁶ psi [GPa]	D 790	0.30 [2.1]
Notched Izod	½" bar @23°C	ft-lb/in [J/m]	D 256	26.1 [1392]
Notched Izod	½" bar @0°C	ft-lb/in [J/m]	D 256	17.1 [913]
Rockwell Hardness		M Scale	D 785	44
Thermal Properties				
Vicat Softening Point		°F [°C]	D 1525	275 [135]
Deflection Temperature, Annealed	1.8MPa, 0.250"	°F [°C]	D 648	217 [103]
Coeff. of Linear Therm. Expansion	32 – 312°F	in/ in/°F	D 696	0.000052
Coeff. of Linear Therm. Expansion	0 – 100°C	mm/mm/°C	D 696	0.0000936
Rheological Properties				
Melt Flow Rate	230°C & 3.8 kg	g/10min	D 1238	1.9
Optical Properties				
	d = 3.2 mm			
Light Transmission		%	D 1003	Opaque
Other Properties				
Specific Gravity			D 792	1.15
Water Absorption		% Max	D 570	0.26
Mold Shrinkage		in/in, mm/mm	D 955	0.004 – 0.008
Bulk Density		g/cc	D 1895	0.65
Recommended processing conditions				
Predrying Temperature		°F [°C]		180 [82]
Predrying Time		hour		3 – 4
Melt Temperature		°F [°C]		460 – 510 [238 – 265]
Cylinder Temperature		°F [°C]		390 – 510 [199 – 265]
Mold Temperature		°F [°C]		150 – 210 [65 – 99]

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

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