Product Information

CYREX® 200-8005 acrylic-polycarbonate alloy

Product Profile:

CYREX 200-8005 alloy is an opaque, acrylic-polycarbonate alloy with an impact strength that is higher than polycarbonate for molding and extrusion medical applications.

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 200-8005 alloy are:
- medium melt flow rate
- excellent resistance to both alcohol and lipids
- good resistance to EtO, gamma and E-beam sterilization

Application:

Used for injection molding and extrusion of both thin and thick wall applications which require excellent toughness.

Examples:

Medical devices such as heart/lung machine filter and portable binocular headlight.

Processing:

CYREX 200-8005 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.

Regulatory and compliance requirements:

Meets requirements of the United States Pharmacopeia Class VI in 8005 color only; ISO 10993-1 in 8005 color 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	CYREX® 200-8005 alloy
Mechanical Properties				Typical Value
Tensile Strength		psi [MPa]	D 638	8000 [55.2]
Tensile Modulus		x10⁶ psi [GPa]	D 638	0.32 [2.2]
Tensile Elongation @ Yield		%	D 638	4.3
Tensile Elongation @ Break		%	D 638	57
Flexural Strength		psi [MPa]	D 790	11300 [78.9]
Flexural Modulus		x10⁶ psi [GPa]	D 790	0.32 [2.2]
Notched Izod	⅛" bar @23°C	ft-lb/in [J/m]	D 256	26 [1387]
Rockwell Hardness		M Scale	D 785	49
Thermal Properties				
Vicat Softening Point		°F [°C]	D 1525	286 [141]
Deflection Temperature, Annealed	1.8MPa, 0.250"	°F [°C]	D 648	214 [101]
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	3.5
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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