

## Evonik CYRO CyRex® 300 Acrylic-Polycarbonate Alloy

Category : Polymer , Thermoplastic , Acrylic (PMMA) , Acrylic/Polycarbonate Alloy , Polycarbonate (PC)

### Material Notes:

CYREX 300 alloy is suitable for applications where a high degree of heat resistance is necessary. It has a deflection temperature of 253°F and a Vicat softening point of 306°F whereas CYREX 200 alloy has a deflection temperature of 214°F and a Vicat softening point of 277°F. Information provided by Cyro Industries

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Evonik-CYRO-CyRex-300-Acrylic-Polycarbonate-Alloy.php](http://www.lookpolymers.com/polymer_Evonik-CYRO-CyRex-300-Acrylic-Polycarbonate-Alloy.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.17 g/cc	1.17 g/cc	ASTM D792
Water Absorption	<= 0.26 %	<= 0.26 %	ASTM D570
Linear Mold Shrinkage	0.0040 - 0.0080 cm/cm	0.0040 - 0.0080 in/in	ASTM D551
Melt Flow	1.9 g/10 min @Load 3.80 kg, Temperature 230 °C	1.9 g/10 min @Load 8.38 lb, Temperature 446 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	55	55	ASTM D785
Tensile Strength, Yield	62.7 MPa	9090 psi	ASTM D638
Elongation at Break	73 %	73 %	ASTM D638
Elongation at Yield	4.7 %	4.7 %	ASTM D638
Tensile Modulus	2.20 GPa	319 ksi	ASTM D638
Flexural Strength	91.7 MPa	13300 psi	ASTM D790
Flexural Modulus	2.30 GPa	334 ksi	ASTM D790
Izod Impact, Notched	5.66 J/cm @Thickness 6.35 mm, Temperature 22.8 °C	10.6 ft-lb/in @Thickness 0.250 in, Temperature 73.0 °F	
	8.38 J/cm @Thickness 3.17 mm, Temperature 22.8 °C	15.7 ft-lb/in @Thickness 0.125 in, Temperature 73.0 °F	

Thermal Properties	Metric	English	Comments
	93.6 µm/m-°C	52.0 µin/in-°F	

CTE linear Thermal Properties	Metric @ Temperature 0.000 - 100 °C	English @ Temperature 32.0 - 212 °F	ASTM D696 Comments
Deflection Temperature at 1.8 MPa (264 psi)	123 °C	253 °F	ASTM D648
Vicat Softening Point	152 °C	306 °F	ASTM D1525
Flammability, UL94	HB	HB	

Descriptive Properties	Value	Comments
Chemical Resistance to Acetone	Non Resistant	Visual Inspection, immersion 24hrs
Chemical Resistance to Ammonia	Limited Resistance	Elongation Retention, immersion 24hrs
	Limited Resistance	Resistance under Strength Retention
	Non Resistant	Elongation Retention, immersion 100hrs
	Resistant	Strength Retention, immersion 100hrs
	Resistant	Strength Retention, immersion 24hrs
Chemical Resistance to Antifreeze	Non Resistant	Strength Retention (3100 psi, 170hrs)
Chemical Resistance to Baking Soda Paste	Resistant	Visual Inspection, exposed 92hrs
Chemical Resistance to Bleach 10%	Resistant	Elongation Retention, immersion 24hrs
Chemical Resistance to Butter	Limited Resistance	Strength Retention (3100 psi, 24hrs)
	Resistant	Stain Resistance, 24hrs
Chemical Resistance to Citric Acid Solution (0.1%)	Resistant	Stain Resistance, 24hrs
Chemical Resistance to Coffee	Resistant	Stain Resistance, 24hrs
Chemical Resistance to Diesel Fuel	Limited Resistance	Strength Retention (1750 psi, 70hrs)
Chemical Resistance to DOP (Phthalate)	Non Resistant	Time to Craze under Stress (4000 psi)
Chemical Resistance to Ethanol	Limited Resistance	Strength Retention, immersion 1000hrs
	Resistant	Strength Retention, immersion 500hrs
Chemical Resistance to Ethylene Glycol	Resistant	Visual Inspection, 1hr immersion
Chemical Resistance to Fantastic Cleaner	Limited Resistance	Resistance under Strength Retention
	Resistant	Strength Retention, immersion 100hrs
	Resistant	Strength Retention, immersion 24hrs
		Elongation Retention, immersion 100hrs

Descriptive Properties	Resistant Value	Comments
	Resistant	Elongation Retention, immersion 24hrs
Chemical Resistance to Fluorides	Resistant	Visual Inspection, exposed 92hrs
Chemical Resistance to French's Mustard	Resistant	Stain Resistance, 24hrs
Chemical Resistance to Gasoline	Limited Resistance	Strength Retention, immersion 500hrs
	Non Resistant	Strength Retention, immersion 1000hrs
Chemical Resistance to Glycerin	Resistant	Visual Inspection, immersion 170hrs, 150F
Chemical Resistance to Heavy Duty Detergent	Resistant	Visual Inspection, immersion 1000hrs
Chemical Resistance to Heptane	Resistant	Strength Retention, immersion 1000hrs
Chemical Resistance to Igepal (1%) Solution	Resistant	Strength Retention (3750 psi, 70hrs)
Chemical Resistance to IPA	Non Resistant	Strength Retention (3100 psi, 70hrs)
	Resistant	Resistance under Strength Retention
Chemical Resistance to IPA/Water 50%	Resistant	Visual Inspection, 1hr immersion
Chemical Resistance to Kerosene	Resistant	Strength Retention (3100 psi, 10hrs)
Chemical Resistance to Lipids	Limited Resistance	Strength Retention (3100 psi, 70hrs)
	Resistant	Resistance under Strength Retention
Chemical Resistance to Lipstick	Resistant	Stain Resistance, 24hrs
Chemical Resistance to Octane/Toluene 75%/25%	Limited Resistance	Strength Retention, immersion 1000hrs
	Resistant	Strength Retention, immersion 500hrs
Chemical Resistance to Rust Inhibitor Veto #4224	Non Resistant	Strength Retention (3100 psi, 170hrs)
Chemical Resistance to Rust Inhibitor Veto #53359	Limited Resistance	Strength Retention (3100 psi, 170hrs)
Chemical Resistance to Soap and Water	Resistant	Elongation Retention, immersion 100hrs
	Resistant	Elongation Retention, immersion 24hrs
	Resistant	Resistance under Strength Retention
	Resistant	Strength Retention, immersion 100hrs
	Resistant	Strength Retention, immersion 24hrs
Chemical Resistance to Sodium Hydroxide (0.5%)	Resistant	Stain Resistance, 24hrs
Chemical Resistance to Tea	Resistant	Stain Resistance, 24hrs

Descriptive Properties	Value	Comments
Chemical Resistance to Transmission Fluid	Resistant	Strength Retention (3100 psi, 170hrs)
Chemical Resistance to Vinyl Gasket	Resistant	Strength Retention (3100 psi, 24hrs)
Resistance to Palmolive Dishwasher/Water 50%	Resistant	Visual Inspection, immersion 24hrs

## Contact Songhan Plastic Technology Co.,Ltd.

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