

AuroraGuard™ ENV48-10058

Aurora Material Solutions, LLC - Polysulfone

General Information
Product Description

Unreinforced injection molding grade of natural color Polysulfone (PSU). Provides excellent resistance to oxidation and hydrolysis and chemical resistance to mineral acids, alkali, and salt solutions. Suitable for applications requiring prolonged use at high temperatures up to 300 °F. FDA food contact compliant. REACH and RoHS compliant.

Formerly branded as ENVIROPLAS® .

General

Material Status	• Commercial: Active
Availability	• Asia Pacific • Europe • Latin America • North America
Features	• Combustion Resistant • Good Dimensional Stability • Good ESCR (Stress Crack Resist.) • Good Thermal Stability • High Heat Resistance • Hydrolysis Resistant
Uses	• Appliance Components • Batteries • Electrical Parts • Food Service Applications
Agency Ratings	• FDA 21 CFR 177.1655
RoHS Compliance	• RoHS Compliant
Appearance	• Clear/Transparent
Forms	• Pellets
Processing Method	• Injection Molding

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.23		ASTM D792
Melt Mass-Flow Rate (MFR) (337°C/6.6 kg)	25	g/10 min	ASTM D1238
Molding Shrinkage - Flow	6.0E-3 to 9.0E-3	in/in	ASTM D955
Water Absorption (Equilibrium)	0.30	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Break)	11000	psi	ASTM D638
Flexural Modulus	407000	psi	ASTM D790
Flexural Strength	16100	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (73°F)	1.1	ft-lb/in	ASTM D256
Gardner Impact (73°F)	440	in-lb	ASTM D5420
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (264 psi, Unannealed)	340	°F	ASTM D648
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.25 in)	V-0		Internal Method

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	280	°F
Drying Time	4.0 to 6.0	hr
Suggested Max Moisture	0.020	%
Rear Temperature	625 to 680	°F
Middle Temperature	625 to 680	°F
Front Temperature	625 to 680	°F
Nozzle Temperature	625 to 680	°F
Mold Temperature	250 to 310	°F



Injection Rate	Moderate
Back Pressure	50.0 to 100 psi
Screw Speed	40 to 70 rpm

Notes

¹ Typical properties: these are not to be construed as specifications.

