

AuroraGuard™ 171-(a)

Aurora Material Solutions, LLC - Polyetherimide

General Information
Product Description

AuroraGuard™ 171-(a) is a 20% fiberglass reinforced, flame retardant, Polyetherimide injection molding grade. Where (a) equals a 5-digit number indicating either an amber natural, black, or custom color.

Formerly branded as ENVIROPLAS®.

General

Material Status	• Commercial: Active
Availability	• Asia Pacific • Latin America • Europe • North America
Filler / Reinforcement	• Glass Fiber, 20% Filler by Weight
Additive	• Flame Retardant
Features	• Flame Retardant • High Stiffness • Good Thermal Stability • High Strength
Uses	• Lighting Applications
Agency Ratings	• UL f1
RoHS Compliance	• RoHS Compliant
UL File Number	• E192776
Appearance	• Black • Colors Available • Natural Color
Forms	• Pellets
Processing Method	• Injection Molding

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.42		ASTM D792
Melt Mass-Flow Rate (MFR) (337°C/6.6 kg)	6.0	g/10 min	ASTM D1238
Molding Shrinkage - Flow	3.0E-3 to 5.0E-3	in/in	ASTM D955
Outdoor Suitability	f1		UL 746C
Ash Content	20	%	ASTM D5630
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Break)	18700	psi	ASTM D638
Tensile Elongation (Break)	4.0	%	ASTM D638
Flexural Modulus	1.00E+6	psi	ASTM D790
Flexural Strength	32500	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (73°F)	1.2	ft·lb/in	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (264 psi, Unannealed)	407	°F	ASTM D648
RTI Elec			UL 746B
0.016 in	221	°F	
0.06 to 0.12 in	338	°F	
RTI Imp			UL 746B
0.016 in	221	°F	
0.06 to 0.12 in	338	°F	
RTI Str			UL 746B
0.016 in	221	°F	
0.06 to 0.12 in	338	°F	
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+16	ohms·cm	ASTM D257



Dielectric Strength	990 V/mil	ASTM D149
Arc Resistance	PLC 7	ASTM D495
Comparative Tracking Index (CTI)	PLC 4	UL 746A
High Amp Arc Ignition (HAI)		UL 746A
0.06 in	PLC 1	
0.07 in	PLC 1	
0.12 in	PLC 0	
High Voltage Arc Tracking Rate (HVTR)	PLC 3	UL 746A
Hot-wire Ignition (HWI)		UL 746A
0.06 in	PLC 4	
0.07 in	PLC 4	
0.12 in	PLC 2	
Flammability	Nominal Value	Unit
Flame Rating		UL 94
0.02 to 0.12 in	V-0	
0.07 to 0.12 in	5VA	

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	300	°F
Drying Time	4.0 to 6.0	hr
Rear Temperature	630 to 750	°F
Middle Temperature	640 to 750	°F
Front Temperature	650 to 750	°F
Nozzle Temperature	650 to 750	°F
Mold Temperature	275 to 325	°F
Injection Rate	Moderate-Fast	
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.

