AuroraGuard™ 171-(a)

Aurora Material Solutions, LLC - Polyetherimide

Monday, November 23, 2026

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 • Europe	• Latin America • North America	
Filler / Reinforcement	• Glass Fiber, 20% Filler by Weight		
Additive	• Flame Retardant		
Features	• Flame Retardant • Good Thermal Stability	• High Stiffness • High Strength	
Uses	• Lighting Applications		
Agency Ratings	• UL f1		
UL File Number	• E192776		
Appearance	• Black	• Colors Available	• Natural Color
Forms	• Pellets		
Processing Method	• Injection Molding		
Literature	• Literature Library • Locate Your Sales Representative | Aurora Material Solutions		

Properties

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density / Specific Gravity	1.42		1.42	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (337°C/6.6 kg)	6.0	g/10 min	6.0	g/10 min	ASTM D1238
Molding Shrinkage - Flow	3.0E-3 to 5.0E-3	in/in	0.30 to 0.50	%	ASTM D955
UV Exposure & Water Immersion	f1		f1		UL 746C
Ash Content	20	%	20	%	ASTM D5630
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Strength (Break)	18700	psi	129	MPa	ASTM D638
Tensile Elongation (Break)	4.0	%	4.0	%	ASTM D638
Flexural Modulus	1.00E+6	psi	6890	MPa	ASTM D790
Flexural Strength	32500	psi	224	MPa	ASTM D790
Impact	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Notched Izod Impact (73°F (23°C))	1.2	ft·lb/in	64	J/m	ASTM D256

Our staff is available to answer questions and provide technical assistance at 978.537.8261
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Thermal	Nominal Value (English)		Nominal Value (SI)		Test Method
Deflection Temperature Under Load					ASTM D648
264 psi (1.8 MPa), Unannealed	407	°F	208	°C	
RTI Elec					UL 746B
0.016 in (0.41 mm)	221	°F	105	°C	
0.06 to 0.12 in (1.5 to 3.0 mm)	338	°F	170	°C	
RTI Imp					UL 746B
0.016 in (0.41 mm)	221	°F	105	°C	
0.06 to 0.12 in (1.5 to 3.0 mm)	338	°F	170	°C	
RTI Str					UL 746B
0.016 in (0.41 mm)	221	°F	105	°C	
0.06 to 0.12 in (1.5 to 3.0 mm)	338	°F	170	°C	

Electrical	Nominal Value (English)		Nominal Value (SI)		Test Method
Volume Resistivity	1.0E+16	ohms·cm	1.0E+16	ohms·cm	ASTM D257
Dielectric Strength	990	V/mil	39	kV/mm	ASTM D149
Arc Resistance	PLC 7		PLC 7		ASTM D495
Comparative Tracking Index (CTI)	PLC 4		PLC 4		UL 746A
High Amp Arc Ignition (HAI)					UL 746A
0.06 in (1.5 mm)	PLC 1		PLC 1		
0.07 in (1.9 mm)	PLC 1		PLC 1		
0.12 in (3.0 mm)	PLC 0		PLC 0		
High Voltage Arc Tracking Rate (HVTR)	PLC 3		PLC 3		UL 746A
Hot-wire Ignition (HWI)					UL 746A
0.06 in (1.5 mm)	PLC 4		PLC 4		
0.07 in (1.9 mm)	PLC 4		PLC 4		
0.12 in (3.0 mm)	PLC 2		PLC 2		

Flammability	Nominal Value (English)		Nominal Value (SI)		Test Method
Flame Rating					UL 94
0.02 to 0.12 in (0.4 to 3.0 mm)	V-0		V-0		
0.07 to 0.12 in (1.9 to 3.0 mm)	5VA		5VA		

Processing Information

Injection	Nominal Value (English)		Nominal Value (SI)	
Drying Temperature	300	°F	149	°C
Drying Time	4.0 to 6.0	hr	4.0 to 6.0	hr
Rear Temperature	630 to 750	°F	332 to 399	°C
Middle Temperature	640 to 750	°F	338 to 399	°C
Front Temperature	650 to 750	°F	343 to 399	°C
Nozzle Temperature	650 to 750	°F	343 to 399	°C
Mold Temperature	275 to 325	°F	135 to 163	°C
Injection Rate	Moderate-Fast		Moderate-Fast	
Back Pressure	50.0 to 100	psi	0.345 to 0.689	MPa
Screw Speed	40 to 70	rpm	40 to 70	rpm

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