

AuroraGuard™ 083-(a)

Aurora Material Solutions, LLC - Polybutylene Terephthalate

General Information

Product Description

AuroraGuard™ 083-(a) is a 30 Fiberglass Reinforced, Flame Retardant, Polybutylene Terephthalate (PBT) Injection Molding Grade that Contains an Antimicrobial Additive. UL Recognizes that the (a) Indicates a 5 -Digit Number for Natural, Black or Custom Color..

Formerly branded as ENVIRON®

General

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Latin America	• North America
Features	• Flame Retardant	• Good Moldability	• Oil Resistant
	• Fuel Resistant	• Medium Viscosity	• Solvent Resistant
Uses	• Electrical/Electronic Applications	• HVAC Applications	• Industrial Tanks
Agency Ratings	• UL 94		
Appearance	• Black	• Natural Color	• Unspecified Color
Forms	• Pellets		
Processing Method	• Injection Molding		

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.63		ASTM D792
Melt Mass-Flow Rate (MFR) (250°C/2.16 kg)	16	g/10 min	ASTM D1238
Molding Shrinkage - Flow	5.0E-3 to 8.0E-3	in/in	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Break)	15200	psi	ASTM D638
Tensile Elongation (Yield)	2.5	%	ASTM D638
Flexural Modulus	1.30E+6	psi	ASTM D790
Flexural Strength	25000	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)	380	°F	ASTM D648
RTI Elec	176	°F	UL 746B
RTI Imp	176	°F	UL 746B
RTI Str	176	°F	UL 746B
Electrical	Nominal Value	Unit	Test Method
Comparative Tracking Index (CTI) (0.120 in)	PLC 2		UL 746A
High Amp Arc Ignition (HAI)			UL 746A
0.06 in	PLC 1		
0.12 in	PLC 0		
High Voltage Arc Resistance to Ignition (HVAR) (0.120 in)	PLC 5		UL 746A
Hot-wire Ignition (HWI)			UL 746A
0.06 in	PLC 2		
0.12 in	PLC 1		
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.06 in	V-0		



0.12 in

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V-0
5VA

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	185 to 250	°F
Drying Time	3.0 to 5.0	hr
Suggested Max Moisture	0.020	%
Rear Temperature	470 to 490	°F
Middle Temperature	490 to 510	°F
Front Temperature	490 to 510	°F
Nozzle Temperature	470 to 490	°F
Mold Temperature	150 to 200	°F
Injection Rate	Moderate	
Back Pressure	50.0 to 200	psi
Screw Speed	50 to 80	rpm

Notes

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

