

AuroraGuard™ 084-7(a)

Aurora Material Solutions, LLC - Polybutylene Terephthalate

General Information

Product Description

AuroraGuard™ 084-7(a) is a 15% Fiberglass Reinforced, Flame Retardant, Black Polybutylene Terephthalate (PBT) Injection Molding Grade. Where 7(a) Indicates a 5 -Digit Number Recognized by UL to Indicate a Black Color.

Formerly branded as ENVIRON®

General

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

Properties ¹

	Nominal Value	Unit	Test Method
Physical			
Density / Specific Gravity	1.53		ASTM D792
Melt Mass-Flow Rate (MFR) (250°C/2.16 kg)	25	g/10 min	ASTM D1238
Molding Shrinkage - Flow	6.0E-3 to 8.0E-3	in/in	ASTM D955
Molding Shrinkage - Across Flow	0.010 to 0.012	in/in	ASTM D955
Mechanical			
Tensile Strength (Break)	14800	psi	ASTM D638
Tensile Elongation (Yield)	2.5	%	ASTM D638
Flexural Modulus	825000	psi	ASTM D790
Flexural Strength	21800	psi	ASTM D790
Impact			
Notched Izod Impact (73°F)	1.5	ft·lb/in	ASTM D256
Thermal			
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
Flammability			
Flame Rating			UL 94
0.06 in		V-0	
0.12 in		V-0	
		5VA	

Processing Information

	Nominal Value	Unit
Injection		
Drying Temperature	230 to 250	°F
Drying Time	4.0 to 6.0	hr
Suggested Max Moisture	0.020	%
Rear Temperature	470 to 490	°F



Middle Temperature	470 to 490 °F
Front Temperature	490 to 510 °F
Nozzle Temperature	470 to 490 °F
Mold Temperature	150 to 190 °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.

