

AuroraTec™ ENV39-A2010DR-(a)

Aurora Material Solutions, LLC - Polycarbonate + PBT

General Information
Product Description

AuroraTec™ ENV39-A2010DR-(a) is an Unfilled, Flame Retardant, UV Stabilized, Polycarbonate / Polybutylene Terephthalate (PC/PBT) Injection Molding Grade. Where (a) Denotes UL Recognizes the (a) to Represent a 5 Digit Number Indicating Natural, Black or Custom Color.

Formerly branded as ENVIRON®

General

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Latin America	• North America
	• Europe		
Additive	• Flame Retardant	• Mold Release	• UV Stabilizer
Features	• Flame Retardant	• Good Mold Release	• UV Stabilized
Uses	• Electrical/Electronic Applications		
	• Outdoor Applications		
Agency Ratings	• EC 1907/2006 (REACH)		
RoHS Compliance	• RoHS Compliant		
UL File Number	• E.192776		
Appearance	• Black	• Colors Available	• Natural Color
Processing Method	• Injection Molding		

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.28		ASTM D792
Melt Mass-Flow Rate (MFR) (250°C/5.0 kg)	24	g/10 min	ASTM D1238
Molding Shrinkage - Flow (0.125 in)	7.0E-3 to 0.011	in/in	ASTM D955
Outdoor Suitability	f1		UL 746C
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Yield)	8400	psi	ASTM D638
Tensile Elongation (Break)	60	%	ASTM D638
Flexural Modulus	320000	psi	ASTM D790
Flexural Strength	11000	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (73°F)	13	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)	187	°F	ASTM D648
RTI Elec			UL 746B
0.04 in	176	°F	
0.06 in	176	°F	
0.12 in	176	°F	
RTI Imp			UL 746B
0.04 in	176	°F	
0.06 in	176	°F	
0.12 in	176	°F	
RTI Str			UL 746B
0.04 in	176	°F	
0.06 in	176	°F	
0.12 in	176	°F	



Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+15	ohms·cm	IEC 60093
Electric Strength	1000	V/mil	IEC 60243-1
Arc Resistance	PLC 6		ASTM D495
Comparative Tracking Index (CTI)	PLC 2		UL 746A
High Amp Arc Ignition (HAI)			UL 746A
0.04 in	PLC 2		
0.06 in	PLC 1		
0.12 in	PLC 1		
High Voltage Arc Tracking Rate (HVTR)	PLC 1		UL 746A
Hot-wire Ignition (HWI)			UL 746A
0.04 in	PLC 3		
0.06 in	PLC 2		
3.00 in	PLC 1		

Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.04 in		V-0	
0.06 in		V-0	
0.12 in	• •	V-0 5VA	
Glow Wire Flammability Index			IEC 60695-2-12
0.04 in		960 °F	
0.06 in		960 °F	
0.12 in		960 °F	
Glow Wire Ignition Temperature			IEC 60695-2-13
0.04 in		825 °F	
0.06 in		750 °F	
0.12 in		725 °F	

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	230	°F
Drying Time	3.0 to 4.0	hr
Suggested Max Moisture	0.020	%
Rear Temperature	480 to 500	°F
Middle Temperature	480 to 500	°F
Front Temperature	500 to 540	°F
Nozzle Temperature	480 to 520	°F
Mold Temperature	140 to 160	°F
Injection Rate	Moderate-Fast	
Back Pressure	50.0 to 200	psi
Screw Speed	50 to 80	rpm

