

AuroraGuard™ ENV12-A0712DR-(a)

Aurora Material Solutions, LLC - Polycarbonate

General Information

Product Description

AuroraGuard™ ENV12-A0712DR-(a) is a UV Stabilized, Flame Retardant, Polycarbonate PC) Injection Molding Grade. Where (a) denotes that UL recognizes a 4 or 5-digit number to indicate a black, natural, or custom color.

Formerly branded as ENVIROPLAS®.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• Flame Retardant	• Mold Release	• UV Stabilizer
Features	• Flame Retardant • Good Heat Resistance	• 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	• Clear/Transparent	• Colors Available
Forms	• Pellets		
Processing Method	• Injection Molding		

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.20		ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	12	g/10 min	ASTM D1238
Molding Shrinkage - Flow (0.125 in)	5.0E-3 to 7.0E-3	in/in	ASTM D955
Outdoor Suitability	f1		UL 746C
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Yield)	9000	psi	ASTM D638
Tensile Elongation (Break)	100	%	ASTM D638
Flexural Modulus	334000	psi	ASTM D790
Flexural Strength	13600	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-22°F	3.5	ft·lb/in	
73°F	12	ft·lb/in	
Gardner Impact			ASTM D5420
-22°F	400	in·lb	
73°F	440	in·lb	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (264 psi, Unannealed)	268	°F	ASTM D648
RTI Elec			UL 746B
0.06 in	257	°F	
0.12 in	257	°F	
RTI Imp			UL 746B
0.06 in	248	°F	
0.12 in	248	°F	
RTI Str			UL 746B



0.06 in		257 °F	
0.12 in		257 °F	
Electrical		Nominal Value Unit	Test Method
Volume Resistivity		1.0E+16 ohms·cm	IEC 60093
Electric Strength		640 V/mil	IEC 60243-1
Comparative Tracking Index (CTI)		PLC 2	UL 746A
High Amp Arc Ignition (HAI)			UL 746A
0.06 in		PLC 1	
0.12 in		PLC 1	
High Voltage Arc Tracking Rate (HVTR)		PLC 2	UL 746A
Hot-wire Ignition (HWI)			UL 746A
0.06 in		PLC 3	
0.12 in		PLC 2	
Flammability		Nominal Value Unit	Test Method
Flame Rating			UL 94
0.06 in		V-0	
0.12 in	•	V-0	
	•	5VA	
Glow Wire Flammability Index			IEC 60695-2-12
0.06 in		960 °F	
0.12 in		960 °F	
Glow Wire Ignition Temperature			IEC 60695-2-13
0.06 in		960 °F	
3.00 in		960 °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		500 to 540 °F	
Middle Temperature		500 to 540 °F	
Front Temperature		500 to 540 °F	
Nozzle Temperature		480 to 520 °F	
Mold Temperature		160 to 200 °F	
Injection Rate		Moderate-Fast	
Back Pressure		50.0 to 200 psi	
Screw Speed		40 to 70 rpm	

Notes

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

