

HiDura™ D1X12J BK0842

Ascend Performance Materials Operations LLC - Polyamide 612

General Information
Product Description

HiDura D1X12J BK0842 is a low viscosity, medium impact modified, and heat stabilized PA612 grade. It is suitable for profile and pipe extrusions. It exhibits low moisture absorption, good chemical resistance, dimensional stability, and high impact resistance. PA612 offers a unique balance of thermal, mechanical, and physical properties.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• Heat Stabilizer • Impact Modifier		
Features	• Good Surface Finish • Halogen Free	• Heat Stabilized • Heat Stabilized - Organic	• Impact Modified • Low Temperature Toughness
Agency Ratings	• ASTM D4066 PA0620B1200	• ASTM D6779 PA0520B2201	• ISO 1043 PA612 I
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Extrusion	• Profile Extrusion	• Sheet Extrusion
Resin ID	• PA612-I		

Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.00	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 73°F, 0.0787 in	1.2	--	%	
Flow : 73°F, 0.0787 in	2.9	--	%	
Water Absorption (24 hr, 73°F)	0.30	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.90	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	145000	87000	psi	ISO 527-1
Tensile Stress (Yield, 73°F)	4210	--	psi	ISO 527-2
Tensile Stress (Break, 73°F)	5080	4640	psi	ISO 527-2
Tensile Strain (Yield, 73°F)	32	--	%	ISO 527-2
Tensile Strain (Break, 73°F)	> 50	> 50	%	ISO 527-2
Flexural Modulus (73°F)	160000	87000	psi	ISO 178
Flexural Stress (73°F)	4060	2320	psi	ISO 178
Poisson's Ratio (73°F)	0.40	--		ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-40°F	45	49	ft·lb/in ²	
-22°F	47	51	ft·lb/in ²	
73°F	49	53	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-40°F	No Break	No Break		
-22°F	No Break	No Break		
73°F	No Break	No Break		
Notched Izod Impact Strength				ISO 180/1A
-40°F	31	44	ft·lb/in ²	
-22°F	40	44	ft·lb/in ²	
73°F	41	45	ft·lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method



Deflection Temperature Under Load (66 psi, Unannealed)	239	203	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	117	111	°F	ISO 75-2/A
Melting Temperature	424	--	°F	ISO 11357-3
CLTE - Flow (73 to 131°F, 0.0787 in)	1.3E-4	--	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F, 0.0787 in)	7.9E-5	--	in/in/°F	ISO 11359-2
Electrical	Dry	Conditioned	Unit	Test Method
Electric Strength (0.0394 in)	790	760	V/mil	IEC 60243-1

Processing Information

Extrusion	Dry	Unit
Cylinder Zone 1 Temp.	421 to 480	°F
Cylinder Zone 3 Temp.	450 to 480	°F
Cylinder Zone 5 Temp.	450 to 480	°F
Melt Temperature	450 to 475	°F
Die Temperature	450 to 475	°F

Notes

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

