

HiDura™ S1X NT

polyamide 610

HiDura S1X NT is a low-medium viscosity PA610 grade with 62% bio-based content. It is suitable for monofilament, film, and general purpose injection molding applications. PA610 offers a unique balance of thermal, mechanical, and physical properties.

General

Regional Availability	• North America	• Europe	• Asia Pacific
Features	• Abrasion Resistance • Medium Viscosity	• Chemical Resistant	• Good Dimensional Stability
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Casting • Profile Extrusion	• Injection Molding • Sheet Extrusion	• Other Extrusion

Physical	dry	cond.	Unit	Test Standard
Density	1.08	-	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 23°C, 2.00 mm	1.6	*	%	
Flow : 23°C, 2.00 mm	1.8	*	%	
Water Absorption				ISO 62
23°C, 24 hr	0.5	*	%	
Equilibrium, 23°C, 50% RH	1.5	*	%	

Mechanical	dry	cond.	Unit	Test Standard
Tensile Modulus (23°C)	2000	1100	MPa	ISO 527-2
Tensile Stress (Yield, 23°C)	59	44	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	40	65	MPa	ISO 527-2
Tensile Strain (Yield, 23°C)	4.9	24	%	ISO 527-2
Tensile Strain (Break, 23°C)	>50	>50	%	ISO 527-2
Flexural Modulus (23°C)	1800	1000	MPa	ISO 178
Flexural Strength (23°C)	55	27	MPa	ISO 178
Poisson's Ratio (23°C)	0.4		-	ISO 527-2

Impact	dry	cond.	Unit	Test Standard
Charpy Notched Impact Strength				ISO 179/1eA
+23°C	5.7	12	kJ/m ²	
-30°C	6.5	7.4	kJ/m ²	
-40°C	6.5	6.3	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU

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+23°C	N	N	kJ/m²
-30°C	N	N	kJ/m²
-40°C	N	N	kJ/m²
Notched Izod Impact Strength			ISO 180/1A
+23°C	5	7.7	kJ/m²
-30°C	5.6	6.7	kJ/m²
-40°C	5.6	6.1	kJ/m²

Thermal	dry	cond.	Unit	Test Standard
Heat Deflection Temperature				ISO 75-2/A
1.80 MPa, Unannealed	45	-	°C	
0.45 MPa, Unannealed	144	-	°C	
Melting Temperature	225	*	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C, 2.00 mm	100	*	E-6/K	
Transverse : 23 to 55°C, 2.00 mm	105	*	E-6/K	

Electrical	dry	cond.	Unit	Test Standard
Dielectric Strength (1.00 mm)	32	31	kV/mm	IEC 60243

Injection	Value	Unit
Drying Temperature	75 - 85	°C
Drying Time	4 - 8	h
Suggested Max Regrind	20	%
Suggested Max Moisture	≤ 0.2	%
Rear Temperature	270 - 285	°C
Middle Temperature	275 - 290	°C
Front Temperature	275 - 300	°C
Nozzle temperature	275 - 300	°C
Processing (Melt) Temperature	270 - 300	°C
Mold Temperature	65 - 100	°C

Extrusion	Value	Unit
Cylinder Zone 1 Temp	250 - 270	°C
Cylinder Zone 2 Temp	250 - 270	°C
Cylinder Zone 3 Temp	250 - 270	°C
Cylinder Zone 4 Temp	250 - 270	°C
Cylinder Zone 5 Temp	250 - 270	°C

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Melt temperature	240 - 265	°C
Die temperature	250 - 270	°C

