

NOVADYN™ DT/DI

High Performance Polyamide

INVISTA Engineering Polymers

Message:

INVISTA's Novadyn™ DT/DI is made from monomers DYTEK® A diamine, purified terephthalic acid (PTA) and purified isophthalic acid (PIA).

General Information				
Appearance	Clear/Transparent			
Forms	Pellets			
Processing Method	Injection Molding			
Physical	Dry	Conditioned	Unit	Test Method
Density	1.18	1.19	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) 1	17 to 59	--	g/10 min	ISO 1133
Water Absorption (23°C, 24 hr)	0.97	--	%	ISO 62
Hardness	Dry	Conditioned	Unit	Test Method
Shore Hardness (Shore D)	84	--		ISO 868
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	3000	3500	MPa	ISO 527-2/1
Tensile Stress (23°C)	102	111	MPa	ISO 527-2/50
Tensile Strain				ISO 527-2/50
Yield, 23°C	7.0	6.3	%	
Break, 23°C	8.3	7.4	%	
Flexural Modulus ² (23°C)	2900	3200	MPa	ISO 178
Flexural Stress ³ (23°C)	128	143	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-40°C	2.2	--	kJ/m ²	
23°C	5.5	4.8	kJ/m ²	
Charpy Unnotched Impact Strength (23°C)	No Break	--		ISO 179
Notched Izod Impact Strength				ISO 180
-40°C	2.1	--	kJ/m ²	
23°C	6.7	4.3	kJ/m ²	
Unnotched Izod Impact Strength (23°C)	No Break	110 kJ/m ²		ISO 180
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				

0.45 MPa, Unannealed	134	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	122	--	°C	ISO 75-2/A
Glass Transition Temperature ⁴	145	--	°C	DSC
Vicat Softening Temperature				
--	143	--	°C	ISO 306/A50
--	139	--	°C	ISO 306/A120
--	136	--	°C	ISO 306/B50
--	141	--	°C	ISO 306/B120
Optical	Dry	Conditioned	Unit	Test Method
Gloss				ISO 2813
20°	115	--		
60°	128	--		
85°	107	--		
Transmittance	90.7	--	%	ASTM D1003
Additional Information	Dry	Conditioned	Unit	Test Method
Moisture Absorption - After conditioning ⁵	--	3.8	%	ISO 1110
Injection	Dry	Unit		
Rear Temperature	260		°C	
Middle Temperature	275		°C	
Front Temperature	280		°C	
Nozzle Temperature	285		°C	
Mold Temperature	80.0		°C	
Back Pressure	1.50		MPa	
Screw Speed	100		rpm	
NOTE				
1.	270°C to 300°C			
2.	2.0 mm/min			
3.	2.0 mm/min			
4.	20°C/min			
5.	Conditioned at 70°C, 62% RH			

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