TROGAMID® T T5000

Polyamide 6/3T Copolymer

Evonik Industries AG

Message:

TROGAMID® T and BX consist of terephthalic acid and 2,2,4- /2,4,4-trimethyl hexamethylene diamine, a chemical composition that is responsible for their amorphous structure. This makes TROGAMID® T transparent in contrast to the semi-crystalline high-performance plastics of High Performance Polymers. The amorphous structure also results in low molding shrinkage and low tendency to warp.
In addition to the basic products, a range of specially equipped compounds is also available. The product line fits a wide range of applications and satisfies many requirement profiles.
TROGAMID® T5000
Permanently transparent polyamide for injection molding, extrusion, and blow molding; no additives.

General Information		
UL YellowCard	E47637-100050091	E47637-237712
Features	Amorphous	
	Copolymer	
	Good Chemical Resistance	
	Good Electrical Properties	
	Good Thermal Stability	
	High Viscosity	
	Low Shrinkage	
	Low Warpage	
Uses	Electrical/Electronic Applications	
	Filters	
	Gears	
	Machine/Mechanical Parts	
Appearance	Clear/Transparent	
	Colors Available	
	Natural Color	
Processing Method	Blow Molding	
	Extrusion	
	Injection Molding	

Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.12	g/cm³	ISO 1183
Viscosity Number	132	cm³/g	ISO 307
Hardness	**Nominal Value**	**Unit**	**Test Method**
Shore Hardness (Shore D)	87		ISO 868
Ball Indentation Hardness	155	MPa	ISO 2039-1

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2800	MPa	ISO 527-2
Tensile Stress (Yield)	90.0	MPa	ISO 527-2/50
Tensile Strain (Yield)	8.0	%	ISO 527-2/50
Nominal Tensile Strain at Break	> 50	%	ISO 527-2/50
Tensile Creep Modulus			ISO 899-1
1 hr	2300	MPa	
1000 hr	1100	MPa	
Flexural Modulus	3000	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-30°C, Complete Break	7.0	kJ/m^2	
0°C, Complete Break	11	kJ/m^2	
23°C, Complete Break	12	kJ/m^2	
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	No Break		
0°C	No Break		
23°C	No Break		
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature			
0.45 MPa, Unannealed	145	°C	ISO 75-2/B
1.8 MPa, Unannealed	130	°C	ISO 75-2/A
Glass Transition Temperature [1]	150	°C	ISO 11357-2
Vicat Softening Temperature			
--	155	°C	ISO 306/A
--	150	°C	ISO 306/B
CLTE			ISO 11359-2
Flow : 23 to 80°C	5.5E-5	cm/cm/°C	
Transverse : 23 to 80°C	5.5E-5	cm/cm/°C	
RTI Elec			UL 746
0.800 mm	100	°C	
1.60 mm	100	°C	
3.00 mm	100	°C	
RTI Imp			UL 746
1.60 mm	80.0	°C	
3.00 mm	85.0	°C	
RTI Str			UL 746
1.60 mm	85.0	°C	
3.00 mm	90.0	°C	
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	1.0E+13	ohms	IEC 60093
Volume Resistivity	1.0E+15	ohms·cm	IEC 60093

Electric Strength	25	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
23°C, 50 Hz	4.20		
23°C, 1 MHz	3.40		
23°C, 100 MHz	4.60		
Dissipation Factor			IEC 60250
23°C, 50 Hz	0.021		
23°C, 1 MHz	0.028		
23°C, 100 MHz	0.025		
Comparative Tracking Index			IEC 60112
-- [2]	575	V	
Solution A	600	V	

Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.800 mm	V-2		
1.60 mm	V-2		
Glow Wire Flammability Index (1.00 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (1.00 mm)	900	°C	IEC 60695-2-13

NOTE	
1.	10 K/min
2.	100 drops value

Recommended distributors for this material

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