

TROGAMID® T BX9724

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® BX9724

Polymer blend consisting of amorphous and semi-crystalline polyamides, 40% glass fiber reinforced, with high tensile modulus for injection molding, dimensionally stable even while absorbing water; appropriate for substituting cast metal parts with plastic. Moldings exhibit outstanding surface qualities in spite of their high glass fiber content.

General Information			
Filler / Reinforcement	Glass Fiber,40% Filler by Weight		
Features	Amorphous		
	Copolymer		
	Good Chemical Resistance		
	Good Dimensional Stability		
	Good Electrical Properties		
	Good Thermal Stability		
	High Viscosity		
	Low Shrinkage		
	Low Warpage		
	Outstanding Surface Finish		
Uses	Semi Crystalline		
	Electrical/Electronic Applications		
	Filters		
	Gears		
	Machine/Mechanical Parts		
Appearance	Metal Replacement		
	Clear/Transparent		
	Colors Available		
Processing Method	Natural Color		
	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.48	g/cm³	ISO 1183
Viscosity Number	130	cm³/g	ISO 307
Hardness	Nominal Value	Unit	Test Method

Shore Hardness (Shore D)	90		ISO 868
Ball Indentation Hardness	262	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	11000	MPa	ISO 527-2
Tensile Stress (Yield)	220	MPa	ISO 527-2/5
Nominal Tensile Strain at Break	3.2	%	ISO 527-2/5
Tensile Creep Modulus			ISO 899-1
1 hr	9600	MPa	
1000 hr	5200	MPa	
Flexural Modulus	12000	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C, Complete Break	10	kJ/m ²	
0°C, Complete Break	11	kJ/m ²	
23°C, Complete Break	14	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C, Complete Break	80	kJ/m ²	
0°C, Complete Break	87	kJ/m ²	
23°C, Complete Break	96	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (0.45 MPa, Unannealed)	230	°C	ISO 75-2/B
Glass Transition Temperature ¹	93.0	°C	ISO 11357-2
Vicat Softening Temperature	230	°C	ISO 306/B
Melting Temperature (DSC)	260	°C	ISO 3146
CLTE			ISO 11359-2
Flow : 23 to 80°C	2.2E-5	cm/cm/°C	
Transverse : 23 to 80°C	3.8E-5	cm/cm/°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	27	kV/mm	IEC 60243-1
Relative Permittivity (23°C, 1 MHz)	6.20		IEC 60250
Dissipation Factor (23°C, 1 MHz)	0.025		IEC 60250
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	HB		
1.60 mm	HB		
Glow Wire Flammability Index (1.00 mm)	750	°C	IEC 60695-2-12

Glow Wire Ignition Temperature (1.00 mm)	775	°C	IEC 60695-2-13
NOTE			
1.	10 K/min		
2.	100 drops value		

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