

TROGAMID® T T-GF35

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.

General Information			
UL YellowCard	E47637-100037021	E47637-100050091	
Filler / Reinforcement	Glass Fiber,35% Filler by Weight		
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		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.40	g/cm³	ISO 1183
Viscosity Number	100	cm³/g	ISO 307
Hardness	Nominal Value	Unit	Test Method
Shore Hardness (Shore D)	89		ISO 868
Ball Indentation Hardness	200	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	10000	MPa	ISO 527-2
Tensile Stress (Yield)	165	MPa	ISO 527-2/5
Nominal Tensile Strain at Break	2.4	%	ISO 527-2/5

Tensile Creep Modulus			ISO 899-1
1 hr	10000	MPa	
1000 hr	8300	MPa	
Flexural Modulus	12000	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C, Complete Break	8.0	kJ/m ²	
0°C, Complete Break	10	kJ/m ²	
23°C, Complete Break	11	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C, Complete Break	59	kJ/m ²	
0°C, Complete Break	70	kJ/m ²	
23°C, Complete Break	77	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	150	°C	ISO 75-2/B
1.8 MPa, Unannealed	140	°C	ISO 75-2/A
Glass Transition Temperature ¹	150	°C	ISO 11357-2
Vicat Softening Temperature			
--	158	°C	ISO 306/A
--	151	°C	ISO 306/B
CLTE			ISO 11359-2
Flow : 23 to 80°C	3.2E-5	cm/cm/°C	
Transverse : 23 to 80°C	3.0E-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	35	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
23°C, 50 Hz	4.50		
23°C, 1 MHz	3.80		
23°C, 100 MHz	5.00		
Dissipation Factor			IEC 60250
23°C, 50 Hz	0.016		
23°C, 1 MHz	0.024		
23°C, 100 MHz	0.018		
Comparative Tracking Index			IEC 60112
-- ²	550	V	
Solution A	575	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)	700	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (1.00 mm)	750	°C	IEC 60695-2-13
NOTE			
1.	10 K/min		
2.	100 drops value		

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