

TROGAMID® T T5004

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® T5004

Permanently transparent polyamide with UV stabilizer and improved outdoor weathering behavior for injection molding, extrusion, and blow molding.

General Information			
Additive	UV Stabilizer		
Features	Amorphous		
	Copolymer		
	Good Chemical Resistance		
	Good Electrical Properties		
	Good Thermal Stability		
	Good UV Resistance		
	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	125	cm³/g	ISO 307
Hardness	Nominal Value	Unit	Test Method
Shore Hardness (Shore D)	86		ISO 868

Ball Indentation Hardness	150	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	2500	MPa	
1000 hr	1300	MPa	
Flexural Modulus	3000	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C, Complete Break	6.0	kJ/m ²	
0°C, Complete Break	9.0	kJ/m ²	
23°C, Complete Break	10	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	
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	24	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
23°C, 50 Hz	4.20		
23°C, 1 MHz	3.30		
23°C, 100 MHz	4.60		
Dissipation Factor			IEC 60250
23°C, 50 Hz	0.017		
23°C, 1 MHz	0.028		
23°C, 100 MHz	0.024		

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)	800	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (1.00 mm)	875	°C	IEC 60695-2-13
NOTE			
1.	10 K/min		
2.	100 drops value		

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