

DATASHEET

POLYESTER PET-P TX

Polyester PET-P TX is a polyethylene terephthalate compound incorporating a uniformly dispersed solid lubricant. Its specific formulation makes it a premium internally lubricated bearing-grade. Polyester PET-P TX not only has got an outstanding wear resistance but offers in comparison to standard Polyester PET-P an even lower coefficient of friction as well as higher pressure-velocity capabilities.

Applications

- Load Bearings
- Rollers
- Bushings
- Guides
- Precision Parts
- Electrical Insulating Components

Availability

- Colour – Grey
- Type – Sheets & Rods
- Regularly produced in a wide variety of thicknesses

Typical Properties

General Properties	Method	Unit	Test Result
Physical Properties			
Colour	-	-	Blueish Grey
Density	ISO 1183-1	g/cm ²	1.44
Water Absorption:			
- After 24h immersion in water of 23°C	ISO 62	mg	0.06
- At saturation in water of 23°C	-	%	0.47
Thermal Properties			
Melting Temperature (DSC, 10°C/min)	ISO 11357 – 1/-3	°C	245
Glass Transition Temperature (DSC, 10°C/min)	ISO 11357 – 1/-2	°C	-
Thermal Conductivity at 23°C	-	W/(K.m)	0.29
Coefficient of Linear Thermal Expansion:			
- Average value between 23 and 100°C	-	W/(K.m)	65x10 ⁻⁶
- Average value between 23 and 150°C	-	W/(K.m)	85x10 ⁻⁵
- Average value above 150°C	-	W/(K.m)	-
Temperature of Deflection Under Load:			
- Method A: 1.8 MPa	ISO 75-1/-2	°C	75
Max Allowable Service Temperature in Air:			

- Continuously: for 5,000 to 20,000h	-	°C	100
Minimum Service Temperature	-	°C	-20
Flammability:			
- According to UL94 (3/6mm thickness)	-	-	HB
Mechanical Properties			
Tension Test:			
- Tensile Strength	ISO 527-1/-2	MPa	76
- Tensile Strain at Yield	ISO 527-1/-2	%	4
- Tensile Strain at Break	ISO 527-1/-2	%	5
- Tensile Modulus of Elasticity	ISO 527-1/-2	MPa	3300
Flexural Test:			
- Flexural Strength	ISO 178	MPa	122
- Flexural Modulus of Elasticity	ISO 178	MPa	3160
Compression Test:			
- Compressive Stress @ 1/2/5% Nominal Strain	ISO 604	MPa	31/60/102
Charpy Impact Strength - Unnotched	ISO 179-1-1eU	kJ/m2	30
Charpy Impact Strength - Notched	ISO 179-1-1eU	kJ/m2	2.5
Rockwell Hardness	ISO 2039-2	-	94
Dynamic Coefficient of Friction	ISO 7148-2(15)	-	0.15-0.22
Wear Rate	ISO 7148-2(15)	Um/km	2
Electrical Properties			
Electric Strength	EC 60243-1	kV/mm	21
Volume Resistivity	IEC 60093	Ohm.cm	>10E 14
Surface Resistivity	IEC 60093	Ohm	>10E 13
Relative Permittivity – at 1MHz	IEC 60250	-	3.2
Dielectric Dissipation Factor – at 1 MHz	IEC 60250	-	0.014