

## Datasheet

# Opaque Polyester (PET) Sheet, 500mm x 300mm x 25mm

RS Stock number 282-0430



## Description

Polyester (PET) - Opaque










## Features:

Chemical Designation: Polyethylene terephthalate

DIN Abbreviation: PET

Colour, Filler: Opaque

TECADUR PET is a semi-crystalline engineering thermoplastic with very high strength and good rigidity, excellent machinability and versatility of application.

- Very strong and rigid 
- Tough 
- Good sliding properties 
- Abrasion resistant 
- Resistant to many acids, cleaning agents, numerous solvents 
- Very good electrical insulation 
- Easily machined and polished 
- Not resistant long term to hot water over 60° C 
- Easily bonded 
- Easily welded

**Preferred fields:**

Mechanical engineering, automotive engineering, transport and conveyor technology, electrical engineering, precision engineering, household appliances, food technology, medical technology

**Applications:**

- Friction bearings
- Gear wheels
- Tool carriers
- Housing parts
- Rollers
- Friction strips
- Plugs
- Insulators
- Agitators and kneading elements
- Seals

Properties	Unit	Test method DIN EN ISO / ASTM	
<b>Mechanical</b>			
Density	g/cm <sup>3</sup>	527 / D 792	1.37
Tensile strength at yield	MPa	527 / D 638	88
Tensile strength at break	MPa	527 / D 638	
Elongation at break	%	527 / D 638	
Modulus of elasticity in tension	MPa	527 / D 638	2700
Modulus of elasticity in flexure	MPa	178 / D 790	
Ball indentation hardness	MPa	2039 / I	95
Impact strength	kJ/m <sup>2</sup>	179 / D 256	No br.
Creep rupture strength after 1000 hrs with static load	MPa		38
Time yield limit for 1% elongation after 1000 hrs.	MPa		13
Coefficient of friction against hardened and ground steel $p = 0,05 \text{ N/mm}^2, v = 0,6 \text{ m/s}$	-		0.25
Wear conditions as above	µm/km		0.35
<b>Thermal</b>			
Crystalline melting point	°C	DIN 53 736	255
Glass transition temperature	°C	DIN 53 736	70
Heat distortion temperature Method A Method B	°C °C	R 75 R 75	95 170

Properties	Unit	Test method DIN EN ISO / ASTM	
<b>Thermal</b>			
Max. service temperature short term long term	°C °C		170 110
Coefficient of thermal conductivity	W/(m · K)		0.24
Specific heat	J/(g · K)		1.1
Coefficient of thermal expansion	10 <sup>-5</sup> /K	DIN 53 483 / D 696	7
<b>Electrical</b>			
Dielectric constant at 10 <sup>5</sup> Hz		DIN 53 483	3.2
Dielectric loss factor at 10 <sup>5</sup> Hz		DIN 53 483	0.021
Specific volume resistance	Ω · cm	DIN 60093	10 <sup>13</sup>
Surface resistance	Ω	DIN 60093	10 <sup>15</sup>
Dielectric strength 1 mm	kV/mm	ASTM 149	60
Tracking resistance		53 480	KC 350
<b>Miscellaneous</b>			
Moisture absorption: Equilibrium in standard atmosphere (23 °C / 50 % relative humidity)	%	62	0.25
Water absorption at saturation at 23 °C	%	62	0.5
Resistance to hot water, washing soda			not resistant
Flammability according to UL standard 94			HB
Resistance to weathering			not resistant