

PE300 EXTRUDED | POLYETHYLENE

Main features

Very lightweight material. It has good mechanical capacities such as resistance to wear, abrasion and impact, which are preserved even at very low temperatures. Also it has excellent sliding capacity, especially thanks to the reduced coefficient of dynamic friction. It is inert to chemical agents and does not absorb water or liquids. It is only affected by oxidizing acids such as HNO_3 , fuming H_2SO_4 and halogens.

Applications

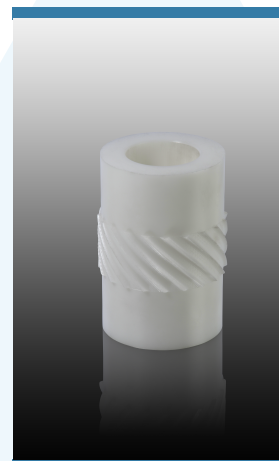
Pumps
Valve bodies
Cams
Slide guides
Gears
Skids
Hopper liners

Application sectors

Food
Industrial automation
Naval Bottling
Medical and pharmaceutical
Chemical
Construction and lifting machinery

FDA Compatibility YES

Available colours



PHYSICAL PROPERTIES

REGULATIONS

UM

PE300

PHYSICAL PROPERTIES			
Density	DIN53479	g/cm ³	0.94
Water absorption (50% at 23° C)	**DIN53495	%	~0
Maximum temp. for use in the air for short duration	-	°C	100
Maximum temperature of use in continuous air	-	°C	80
Minimum temperature of use in continuous air	-	°C	-50

MECHANICAL PROPERTIES			
Yield stress/tensile strength (σ_s)	*DIN53455 (4)	N/mm ²	24
Elongation at break (ϵ_s)	DIN53455	%	10
Breaking load (σ_r)	DIN53455	N/mm ²	-
Elongation at break (ϵ_r)	*DIN53455 (4)	%	>50
Impact resistance	*DIN53453	kJ/m ²	NR
Impact resistance, notched test	*DIN53453	kJ/m ²	18
Rockwell hardness	DIN53465	Scala M	-
Compression test, load 1% deform. nominal	*DIN53454 (3)	N/mm ²	-
Elasticity module	*DIN53457 (5)	N/mm ²	>1000

THERMIC PROPERTIES			
Melting temperature	-	°C	132
VICAT softening temperature	DIN53460	°C	67
Deformation temperature under bending load	DIN53461	°C	44
Coefficient of linear thermal expansion (α)	DIN53752	10 ⁻⁶ /K	150/230
Thermal conductivity at 23°	DIN52612	W/(Kxm)	0.40

ELECTRICAL PROPERTIES			
Volume resistivity	**DIN53482	Ω /cm	10 ¹⁴
Surface resistivity	**DIN53482	Ω	>10 ¹⁴
Dielectric constant at 10 ³ HZ (on thickness of 1 mm.)	**DIN53483	-	2.35
Dielectric dissipation factor ($\tan \delta$) a 10 ³ HZ	**DIN53483	-	<0.002
Dielectric strength (on thickness of 1 mm.)	**DIN53481	kV/mm	90
Electrical leakage resistivity	112/030TI	-	-

OTHER PROPERTIES			
Possibility of gluing	-	-	No
Absence of physiological risks	FDA	-	Yes
Dry friction coefficient on steel	ISO 7147	-	0,12
Flammability	UL94	-	HB
UV stability	-	-	-

* : MEASUREMENTS ON TEST TUBES IN ANHYDROUS STATE

(3): ON CYLINDERS Ø 12X30 MM

(4): TRACTION SPEED 5 MM/MIN

** : MEASUREMENTS ON EQUILIBRIUM TUBES
WITH U.R. 50% AT A TEMPERATURE OF 23° C

(5): TRACTION SPEED 1 MM / MIN

(6): TRACTION SPEED 20 MM/MIN

► info@tecno-plastic.it ► www.tecno-plastic.it

TECNO PLASTIC ENGINEERING s.r.l. Sede operativa: Via Ratti, 80 20855 Lesmo (MB) • Italia Tel. +39 039 6888107 - 6888408

TECNO PLASTIC ENGINEERING®
TPE