ENSINGER
FRAGEN. DENKEN. LÖSEN.

Material Data Sheet, July 2010

TECADUR PBT SAN

Chemical Designation :
DIN-Abbreviation: PBT
Colours, fillers:

Main features

Preferred Fields

Applications

Properties

Mechanical	**dry / moist**		**standard**
Tensile strength at yield	55	MPa	
Elongation at yield		%	
Tensile strength at break		MPa	
Elongation at break		%	
Modulus of elasticity in tension	2500	MPa	
Modulus of elasticity after flexural test		MPa	
Hardness	125		
Impact strength 23º C (Charpy)	n.b.	KJ/m²	
Creep rupture strength after 1000 h with static load	36	MPa	
	12	MPa	

Time yield limit for 1% elongation after 1000 h			
Co-efficient of friction p = 0,05 N/mm²v=0,6 m/s on steel, hardened and ground	0,24		
Wear p = 0,05 N/mm²v=0,6 m/s on steel, hardened and ground	0,2	µm/km	
Thermal	**dry / moist**		**standard**
Crystalline melting point	225	°C	
Glass transition temperature	60	°C	
Heat distortion temperature HDT, Method A	80	°C	
Heat distortion temperature HDT, Method B	165	°C	
Max. service temperature			
short term	170	°C	
long term	110	°C	
Thermal conductivity (23º C)	0,21	W/(K·m)	
Specific heat (23º C)	1,21	J/g.K	
Coefficient of thermal expansion (23-55ºC)	8	10^{-5}1/K	

Properties

Electrical	**dry / moist**		**standard**
Dielectric constant (10^6 Hz)	3		
Dielectric loss factor (10^6 Hz)	0,012		
Specific volume resistance	> 10^13	*cm	
Surface resistance	> 10^15		
Dielectric strength	> 45	kV/mm	
Resistance to tracking	KB 425 CK > 600		

Miscellaneous	**dry / moist**		**standard**
Density	1,33	g/cm^3	
Moisture absorption (23°C/50RH)	0,25	%	
Water absorption to equilibrium	0,4	%	
Flammability acc. to UL standard 94	HB		