

TECASON S

Chemical Designation :

DIN-Abbreviation:

Colours, fillers:

Polysulfone

PSU

transparent, yellowish

Main features

- | high thermal and mechanical capacity
- | high hardness and rigidity
- | inherently flame retardant (UL94 V-O)
- | high dimensional stability
- | good electrical insulation
- | good weldability
- | good gamma radiation resistance
- | high heat deflection temperature

Preferred Fields

- | food technology
- | electrical engineering
- | mechanical engineering
- | vacuum technology
- | pumps and instrument manufacture
- | transport and conveyor technology
- | medical technology
- | electrical engineering
- | automotive engineering
- | chemical engineering
- | precision engineering
- | construction industry

Applications

Properties

Mechanical	dry / moist	standard
Tensile strength at yield	80 MPa	DIN EN ISO 527
Elongation at yield	6 %	DIN EN ISO 527
Tensile strength at break	MPa	

Elongation at break	> 50	%	DIN EN ISO 527
Modulus of elasticity in tension	2600	MPa	DIN EN ISO 527
Modulus of elasticity after flexural test		MPa	
Hardness	147		DIN 53 456 (Kugeldruckhärte)
Impact strength 23° C (Charpy)	n.b.	KJ/m ²	DIN EN ISO 179 (Charpy)
Creep rupture strength after 1000 h with static load	42	MPa	
Time yield limit for 1% elongation after 1000 h	22	MPa	
Co-efficient of friction p = 0,05 N/mm ² v=0,6 m/s on steel, hardened and ground	0,4		
Wear p = 0,05 N/mm ² v=0,6 m/s on steel, hardened and ground		µm/km	

Thermal	dry / moist		standard
Crystalline melting point		°C	
Glass transition temperature	180	°C	DIN 53 765
Heat distortion temperature HDT, Method A	169	°C	ISO-R 75 Verfahren A (DIN 53 461)
Heat distortion temperature HDT, Method B	181	°C	ISO-R 75 Verfahren B (DIN 53 461)
Max. service temperature			
short term	180	°C	
long term	160	°C	
Thermal conductivity (23° C)	0,25	W/(K·m)	
Specific heat (23° C)	1	J/g.K	
Coefficient of thermal expansion (23–55°C)	5,5	10 ⁻⁵ 1/K	DIN 53 752

Properties

Electrical	dry / moist	standard
Dielectric constant (10^6 Hz)	3,1	DIN 53 483, IEC-250
Dielectric loss factor (10^6 Hz)	0,005	DIN 53 483, IEC-250
Specific volume resistance	10^{16} Ω *cm	DIN IEC 60093
Surface resistance	10^{14} Ω	DIN IEC 60093
Dielectric strength	42 kV/mm	DIN 53 481, IEC-243, VDE 0303 Teil 2
Resistance to tracking	KA 1 KB 175	DIN 53 480, VDE 0303 Teil 1

Miscellaneous	dry / moist	standard
Density	1,24 g/cm ³	DIN 53 479
Moisture absorption (23°C/50RH)	0,2 %	DIN EN ISO 62
Water absorption to equilibrium	0,8 %	DIN 53 495
Flammability acc. to UL standard 94	V0	

(1) Testing of semi-finished products

The above information corresponds with our current knowledge and indicates our products and possible applications. We cannot give a legally binding guarantee of chemical resistance, of certain properties and the suitability of our products and their applications. Our products are not destined for use in medical and dental implants. Existing commercial patents must be observed. Unless otherwise stated, these values represent averages taken from injection moulding samples, dry as moulded. We reserve the right to make technical alterations.
