

TECASON S GF 30

Chemical Designation:	Polysulphone		
DIN Abbreviation:	PSU GF 30		
Colour, Filler:	Mid brown, slightly translucent 30% glass fibres		
Availability:	<ul style="list-style-type: none"> • Rod • Plate • Tube • Profile • Finished parts, machined or injection moulded 	<ul style="list-style-type: none"> 4 - 150 mm dia 5 - 80 mm thick 20 - 150 mm OD . 	<ul style="list-style-type: none"> (on request) (on request) (on request)

TECASON GF 30 is a 30% glass fibre reinforced amorphous engineering thermoplastic with very high rigidity and strength for demanding applications.

- Main characteristics:
- High thermal mechanical strength
 - Hydrolysis and steam resistant
 - Very rigid
 - High creep resistance
 - Good dimensional accuracy
 - Good electrical insulation
 - Abrasion resistant
 - Flame retardant UL 94 V-0
 - Easily machined – care required with coolant, susceptible to stress cracking
 - Gamma ray resistant

Preferred fields: Electrical engineering, electronics, mechanical and automotive engineering, vacuum technology, transport and conveyor technology, pump and instrumentation manufacture, precision engineering, jig construction, chemical engineering, plant construction

- Applications:
- Plug parts
 - High strength thermal mechanical parts
 - Coil formers
 - Insulators
 - Sensor housing
 - Light sockets
 - Catalyst support
 - Flanges
 - Switch parts
 - Valve bodies
 - Thrust / distance pieces

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The following information corresponds with our current knowledge and indicates our products and possible applications. We cannot give a legally binding guarantee of certain properties or the suitability for a specific application. Existing commercial patents must be observed. A definitive quality guarantee is given in our general conditions of sales. Unless otherwise stated, these values represent averages taken from injection moulding samples. We reserve the right of technical alterations.

Properties	Unit	Test method DIN EN ISO / ASTM	
Mechanical			
Density	g/cm ³	527 / D 792	1.49
Tensile strength at yield	MPa	527 / D 638	
Tensile strength at break	MPa	527 / D 638	125
Elongation at break	%	527 / D 638	1.8
Modulus of elasticity in tension	MPa	527 / D 638	9900
Modulus of elasticity in flexure	MPa	178 / D 790	
Ball indentation hardness	MPa	2039 / 1	202
Impact strength Izod	kJ/m ²	180	20
Creep rupture strength after 1000 hrs with static load	MPa		
Time yield limit for 1% elongation after 1000 hrs.	MPa		
Coefficient of friction against hardened and ground steel p = 0,05 N/mm ² , v = 0,6 m/s	-		
Wear conditions as above	µm/km		
Thermal			
Crystalline melting point	°C	DIN 53 736	
Glass transition temperature	°C	DIN 53 736	188
Heat distortion temperature Method A Method B	°C °C	R 75 R 75	183 186

Properties	Unit	Test method DIN EN ISO / ASTM	
Thermal			
Max. service temperature short term long term	°C °C	527 / D 792	180 160
Coefficient of thermal conductivity	W/(m · K)	527 / D 638	
Specific heat	J/(g · K)	527 / D 638	
Coefficient of thermal expansion	10 ⁻⁵ /K	527 / D 638	2.1
Electrical			
Dielectric constant at 10 ⁵ Hz		178 / D 790	3,7
Dielectric loss factor at 10 ⁵ Hz		2039 / 1	0.006
Specific volume resistance	Ω · cm	179 / D 256	10 ¹⁶
Surface resistance	Ω		10 ¹⁴
Dielectric strength 1 mm	kV/mm		>60
Tracking resistance			
Miscellaneous			
Moisture absorption: Equilibrium in standard atmosphere (23 °C / 50 % relative humidity)	%		0.1
Water absorption at saturation at 23 °C	%	DIN 53 736	0.5
Resistance to hot water, washing soda		DIN 53 736	resistant
Flammability according to UL standard 94			V0
Resistance to weathering			Not resistant

ENSINGER: Production and stock programme

- Semi-finished product, finished parts, injection moulded parts and profiles in more than 500 materials and modifications.
- Engineering plastics: PA extruded or cast, POM, PC, PET, PBT, PPE, PP, PE
- High temperature plastics: PI, TPI, PEEK, PPS, PES, PPSU, PEI, PSU, PVDF, PCTFE, PTFE
- Stock length: Standard 3 metres. Cast rod and sheet 2 mts. Tube up to 3.5 mts. PE, PP, PVC, and PTFE 2 mts
- Pressed/sintered semi-finished product: PI, PEEK, PPS, PTFE/PI and modifications, as well as PCTFE in special sizes ie, large discs, tubes and rings with diameters up to about 1400 mm
- Material modifications: e.g. glass, carbon and aramid fibre, talc, MoS₂, graphite, PTFE, PE, silicone oil, internal lubrication