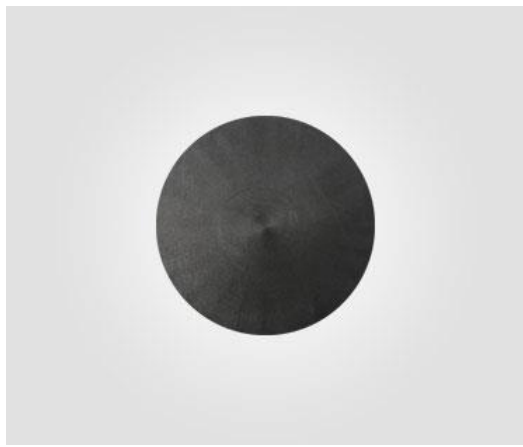


Datasheet AS ZL 250 GF30



It offers increased compressive strength and rigidity, stiffness, creep resistance and dimensional stability whilst retaining good wear resistance. It also allows higher max. service temperatures. AS ZL 250 GF30 is used when improved load capacity or better frictional characteristics are requested. In order to machine parts in larger dimensions, it is necessary to preheat the material to 120 °C before cutting and use diamond tipped saw blades. Please consult our machining guidelines.

Used in: Transport and conveyer, mechanical and automotive engineering, precision engineering, paper and packaging processing machinery.

Applications: Machine parts used at high temperatures, friction rings, levers, support rings, thermal insulators, housing parts and distance pieces.

(1): Data of the resin only.

(2): Made by a pin/rotating disc test according DIN ISO 7148-2 under following conditions: Ra = 0.35 – 0.45 µm (steel disc), v = 0.3 m/s, p = 3 N/mm² and time T>16h.

Dry: Dried at 80 °C and 1 mbar until weight is constant (moisture content less than 0.2%).

Moist: After storage in a standard atmosphere of 23 °C and 50% relative humidity (DIN 50014) until saturation.

Availability*: In stock.

Availability **: Not in stock.

Material	
Material	Nylon 6.6 + 30% glass fiber
Color	Black

Availability*	Unit	Value
Rod diameter	mm	6-160
Tube O.D.	mm	-
Sheet thickness	mm	8-100

Physical Properties	Test Standard	Unit	Condition of Specimen	Value
Mass density (method D and E)	ISO 1183	g/cm ³	Dry	1.35
Moisture absorption at 23 °C and 50% RH (saturation)	ISO 62	%		1.5
Water absorption at 23 °C (saturation)	ISO 62	%		5.5

Mechanical Properties	Test Standard	Unit	Condition of Specimen	Value
Tensile strength at break	ISO 527	MPa	Dry	100
Tensile strength at break	ISO 527	MPa	Moist	-
Elongation at break	ISO 527	%	Dry	8
Elongation at break	ISO 527	%	Moist	-
Modulus of elasticity in tension	ISO 527	MPa	Dry	4800
Modulus of elasticity in tension	ISO 527	MPa	Moist	-
Charpy impact strength (+23 °C)	ISO 179/IeU	kJ/m ²	Dry	20
Charpy impact strength (-40 °C)	ISO 179/IeU	kJ/m ²	Dry	-
Charpy impact strength (notched)	ISO 179/IeA	kJ/m ²	Dry	-
Charpy impact strength (notched)		kJ/m ²	Moist	-
Hardness shore scale D	ISO 868		Dry	85
Time yield limit σ 1/1000 (23 °C/50% RH)	ISO 899	MPa	Moist	-
Time yield limit σ 1/1000 (100 °C)	ISO 899	MPa	Dry	-
Apparent modulus E C/1000 20 (23 °C/50% RH)	ISO 899	MPa	Moist	-

Electrical Properties	Test Standard	Unit	Condition of Specimen	Value
Dielectric constant 1 MHz	IEC 250		Dry	-
Dielectric constant	IEC 250		Moist	-
Dissipation factor tan δ (1 MHz)	IEC 250		Dry	-
Dissipation factor tan δ	IEC 250		Moist	-
Dielectric strength	IEC 243	kV/mm	Dry	30
Dielectric strength	IEC 243	kV/mm	Moist	-
Volume resistivity	IEC 93	$\Omega \cdot \text{cm}$	Dry	$>10^{12}$
Volume resistivity	IEC 93	$\Omega \cdot \text{cm}$	Moist	-
Surface resistivity ROA	IEC 93	Ω	Dry	10^{11}
Surface resistivity ROA	IEC 93	Ω	Moist	-
Resistance to tracking (KA/KB method)	IEC 112		Dry/Moist	-
Resistance to tracking (KC method)	IEC 112		Dry/Moist	-

Thermal Properties	Test Standard	Unit	Condition of Specimen	Value
Heat distortion temperature (method A)	ISO 75	°C	Dry	250
Heat distortion temperature (method B)	ISO 75	°C	Dry	250
Melting point (method A)	ISO 3146	°C		255
Max. service temperature for few hours operation		°C		250
TEP 5.000 hours (50% of tensile strength) ⁽¹⁾	IEC 216	°C		-
TEP 20.000 hours (50% of tensile strength) ⁽¹⁾	IEC 216	°C		150
Thermal coefficient of linear expansion	DIN 53752	1/K \cdot 10 ⁻⁵	Dry	2-3
Thermal conductivity (method A)		W/(K \cdot m)	Dry	0.27
Specific heat	IEC 1006	J/(g \cdot K)	Dry	1.5
Fire performance (flameability according VDE)	VDE 0304		Dry	-
Fire performance (flameability of interior materials in passenger cars h>1 mm)	FMVSS 302	mm/min	Moist	-
Fire performance (flameability according UL standards, thickness of specimen 1.6 mm)	UL 94			HB

Friction Properties	Test Standard	Unit	Condition of Specimen	Value
Resistance to wear ⁽²⁾	ISO 7148-2	$\mu\text{m}/\text{km}$	Dry	-