



SWISS MADE PRECISION INSTRUMENTS
100% MANUFACTURED IN SWITZERLAND



info@regine.ch
www.regine.ch

MATERIAL TECHNICAL DATASHEET

ANTIMAGNETIC, ANTI-ACID STEEL (SA)

Material number 1.4435 (AISI 316L)

COMPOSITION

	C	Si	Mn	P	S	Cr	Mo	Ni
Wt %	≤ 0.030	≤ 1	≤ 2	≤ 0.045	≤ 0.03	17-19	2.5-3.0	12.5-15

MECHANICAL PROPERTIES AT AMBIENT TEMPERATURE

State	Annealed (Solution Heat Treated)
Hardness rockwell HB30	≤ 215
Tensile strength (N/mm ²)	500 - 700
0.2 % Yield stress (N/mm ²)	200
Elongation after fracture (L ₀ = 5d ₀)	≥ 40%

PHYSICAL PROPERTIES

Density (20 °C) Kg/dm ³	8
Specific heat (20 °C) J/(g·K)	0.50
Heat conduction (20 °C) W/(K·m)	15
Electric resistance (20 °C) (Ω·mm ²)/m	0.75
Modulus of elasticity (20 °C) KN/mm ²	200

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Technical information are provided to the best of Regine Switzerland SA knowledge and average values obtained from laboratory's test made on the material.

Regine Switzerland SA declines all responsibility from an improper application or use of the product described in this documents.



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TECHNICAL DATASHEET

PLASTIC TYPE CF

CF, Carbofib (PA66/CF30)

Polyamide 66 reinforced with carbon fibre

Good heat capability, Good Chemical resistance, ESD and Cleanroom safe, Very high rigidity

MECHANICAL PROPERTIES

Flexural modulus + 23° C	17000 Mpa	ASTM D 790
Flexural modulus + 60° C	17000 Mpa	ASTM D 790
Flexural modulus + 90° C	9800 Mpa	ASTM D 790
Flexural modulus + 120° C	8000 Mpa	ASTM D 790
Tensile modulus + 23° C	210 Mpa	ISO 527
Tensile modulus + 60° C	159 Mpa	ISO 527
Tensile modulus + 90° C	134 Mpa	ISO 527
Tensile modulus + 120° C	117 Mpa	ISO 527
Rockwell hardness M	> 100	ASTM D 785
Izod-Impact strenght (notched) + 23° C	70 J7m	ASTM D 256
Charpy-Impact strenght (unnotched) + 23° C	30 Kj/m ²	DIN 53453

THERMAL PROPERTIES

Temp. Of defl. Under load (1.80 Mpa)	256° C	ASTM D 648
Temp. Of defl. Under load (0.45 Mpa)	260° C	ASTM D 648
Vicat softening temperature (50° C/h 50N)	254° C	ISO 306
Coef. Of lin. Therm expansion, normal	2,80 E-5/° C	ASTM D 696
Continous Use Temperature	130° C	20'000 h
Short Time Temperature	190° C	-

ELECTRICAL PROPERTIES

Surface resistivity	10E2 Ohm	100V
Comparative tracking index	< 100 Volts	IEC 112
Decay time	< 0,1 sec.	1000 – 10V

OTHER PROPERTIES

Density	1.28 g/ccm	ISO 1183
Water absorption in water 23° C (24h)	0.60%	ISO 62

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