

Technical Data Sheet

Grilon TSC-20/4 EC

(former: A 70 CF 20 H)

Properties

Mechanical properties		ISO-Nomenclature PA 66+PA 6, MHRs, 14-160N, CF 20			
Density		ISO 1183	g/cm ³	dry	1,22
Tensile-E-Modulus	(1 mm/min)	ISO 527	MPa	dry	16000
		ISO 527	MPa	cond	10000
Tensile strength at yield	(50 mm/min)	ISO 527	MPa	dry	*
		ISO 527	MPa	cond	*
Elongation at yield	(50 mm/min)	ISO 527	%	dry	*
		ISO 527	%	cond	*
Stress at break	(5 mm/min)	ISO 527	MPa	dry	230
		ISO 527	MPa	cond	160
Strain at break	(5 mm/min)	ISO 527	%	dry	3
		ISO 527	%	cond	6
Impact strength	(Charpy, 23°C)	ISO 179/1eU	kJ/m ²	dry	65
		ISO 179/1eU	kJ/m ²	cond	90
Impact strength	(Charpy, -30°C)	ISO 179/1eU	kJ/m ²	dry	60
		ISO 179/1eU	kJ/m ²	cond	60
Notched impact strength	(Charpy, 23°C)	ISO 179/1eA	kJ/m ²	dry	8
		ISO 179/1eA	kJ/m ²	cond	15
Notched impact strength	(Charpy, -30°C)	ISO 179/1eA	kJ/m ²	dry	5
		ISO 179/1eA	kJ/m ²	cond	5
Ball indentation hardness		ISO 2039-1	MPa	dry	---
		ISO 2039-1	MPa	cond	---
Thermal properties					
Melting point	(DSC)	ISO 11357	°C	dry	260
Heat deflection temperature HDT/A	(1.80 MPa)	ISO 75	°C	dry	240
Heat deflection temperature HDT/B	(0.45 MPa)	ISO 75	°C	dry	*
Heat deflection temperature HDT/C	(8.00 MPa)	ISO 75	°C	dry	185
Thermal expansion coefficient long.	(23 - 80°C)	ISO 11359	10 ⁻⁴ /K	dry	0,2
Thermal expansion coefficient trans.	(23 - 80°C)	ISO 11359	10 ⁻⁴ /K	dry	0,9
Maximal usage temperature	long term	EMS	°C	dry	90-120
Maximal usage temperature	short term	EMS	°C	dry	200
Electrical properties					
Dielectric strength	K20/P50	IEC 243-1	kV/mm	dry	*
		IEC 243-1	kV/mm	cond	*
Comparative tracking index	CTI	IEC 112	---	dry	*
		IEC 112	---	cond	*
Volume resistivity		IEC 93	Ω*m	dry	10 ⁵
		IEC 93	Ω*m	cond	10 ⁵
Specific surface resistivity		IEC 93	Ω	dry	*
		IEC 93	Ω	cond	10 ⁶
Behaviour towards external influences					
Flammability	(0.8mm)	UL 94	rating		HB
Water absorption	(23°C/sat.)	DIN 53495	%		5
Moisture absorption	(23°C/50%r.F.)	i.A. DIN 53495	%		1,5
Processing properties					
Linear mould shrinkage	long.	ISO 294	%	dry	0,05
Linear mould shrinkage	trans.	ISO 294	%	dry	0,30

The test values <conditioned> were attained on test pieces stored according to ISO 1110.

* acc. CAMPUS 4.1 not relevant

The recommendations and data given are based on our experience to date. No liability can be assumed in connection with their usage and processing.

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