

Technical Data Sheet

Grilon TSM-30/4

(former: A 70 M 30 H)

Properties

Mechanical properties		ISO-Nomenclature PA 66+PA 6, MHR, 14-050N, MD 30			
Density		ISO 1183	g/cm ³	dry	1,33
Tensile-E-Modulus	(1 mm/min)	ISO 527	MPa	dry	4800
		ISO 527	MPa	cond	2100
Tensile strength at yield	(50 mm/min)	ISO 527	MPa	dry	85
		ISO 527	MPa	cond	50
Elongation at yield	(50 mm/min)	ISO 527	%	dry	---
		ISO 527	%	cond	---
Tensile strength at break	(5 mm/min)	ISO 527	MPa	dry	---
		ISO 527	MPa	cond	---
Elongation at break	(5 mm/min)	ISO 527	%	dry	7
		ISO 527	%	cond	35
Impact strength	(Charpy, 23°C)	ISO 179/1eU	kJ/m ²	dry	>100
		ISO 179/1eU	kJ/m ²	cond	>100
Impact strength	(Charpy, -30°C)	ISO 179/1eU	kJ/m ²	dry	40
		ISO 179/1eU	kJ/m ²	cond	50
Notched impact strength	(Charpy, 23°C)	ISO 179/1eA	kJ/m ²	dry	4
		ISO 179/1eA	kJ/m ²	cond	5
Notched impact strength	(Charpy, -30°C)	ISO 179/1eA	kJ/m ²	dry	3
		ISO 179/1eA	kJ/m ²	cond	4
Ball indentation hardness		ISO 2039-1	MPa	dry	180
		ISO 2039-1	MPa	cond	135
Thermal properties					
Melting point	(DSC)	ISO 11357	°C	dry	260
Heat deflection temperature HDT/A	(1.80 MPa)	ISO 75	°C	dry	100
Heat deflection temperature HDT/B	(0.45 MPa)	ISO 75	°C	dry	---
Heat deflection temperature HDT/C	(8.00 MPa)	ISO 75	°C	dry	---
Thermal expansion coefficient long.	(23 - 80°C)	ISO 11359	10 ⁻⁴ /K	dry	---
Thermal expansion coefficient trans.	(23 – 80°C)	ISO 11359	10 ⁻⁴ /K	dry	---
Maximal usage temperature	Long term	EMS	°C	dry	90-120
Maximal usage temperature	Short term	EMS	°C	dry	180
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 ¹¹
		IEC 93	Ω*m	cond	10 ¹⁰
Specific surface resistivity		IEC 93	Ω	dry	10 ¹²
		IEC 93	Ω	cond	10 ¹¹
Behaviour towards external influences					
Flammability	(0,8mm)	UL 94	rating		HB
Water absorption	(23°C/sat.)	DIN 53495	%		6
Moisture absorption	(23°C/50%r.F.)	i.A. DIN 53495	%		2
Processing properties					
Linear mould shrinkage	long.	ISO 294	%	dry	1,4
Linear mould shrinkage	trans.	ISO 294	%	dry	1,4

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

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