

PROPERTIES

Mechanical Properties

		Standard	Unit	State	Grilamid LV-3H natural
Tensile E-Modulus	1 mm/min	ISO 527	MPa	cond.	6000
Tensile strength at break	5 mm/min	ISO 527	MPa	cond.	105
Elongation at break	5 mm/min	ISO 527	%	cond.	8
Impact strength	Charpy, 23°C	ISO 179/1eU	kJ/m ²	cond.	80
Impact strength	Charpy, -30°C	ISO 179/1eU	kJ/m ²	cond.	80
Notched impact strength	Charpy, 23°C	ISO 179/1eA	kJ/m ²	cond.	20
Notched impact strength	Charpy, -30°C	ISO 179/1eA	kJ/m ²	cond.	15
Shore hardness D		ISO 868	-	cond.	77

Thermal Properties

Melting point	DSC	ISO 11357	°C	dry	178
Heat deflection temperature HDT/A	1.80 MPa	ISO 75	°C	dry	160
Heat deflection temperature HDT/C	8.00 MPa	ISO 75	°C	dry	90
Thermal expansion coefficient long.	23-55°C	ISO 11359	10 ⁻⁴ /K	dry	0.2
Thermal expansion coefficient trans.	23-55°C	ISO 11359	10 ⁻⁴ /K	dry	1.5
Maximum usage temperature	long term	ISO 2578	°C	dry	90 - 120
Maximum usage temperature	short term	ISO 2578	°C	dry	150

Electrical Properties

Dielectric strength		IEC 60243-1	kV/mm	cond.	35
Comparative tracking index	CTI	IEC 60112	-	cond.	550
Specific volume resistivity		IEC 60093	Ω · m	cond.	10 ¹¹
Specific surface resistivity		IEC 60093	Ω	cond.	10 ¹²

General Properties

Density		ISO 1183	g/cm ³	dry	1.22
Flammability (UL94)	0.8 mm	ISO 1210	rating	-	HB
Water absorption	23°C/sat.	ISO 62	%	-	1.1
Moisture absorption	23°C/50% r.h.	ISO 62	%	-	0.6
Linear mould shrinkage	long.	ISO 294	%	dry	0.10
Linear mould shrinkage	trans.	ISO 294	%	dry	0.75

Product-nomenclature acc. ISO 1874: PA12, MHR, 18-060, GF30