

Grilamid 1S XE 4224 nat
PA1010

EMS-GRIVORY | a unit of EMS-CHEMIE AG

Product Texts

Product-nomenclature according to ISO 1874:
PA 1010, G, 18-020

Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	2000 / 1300	MPa	ISO 527-1/-2
Yield stress	55 / 50	MPa	ISO 527-1/-2
Yield strain	5 / 20	%	ISO 527-1/-2
Nominal strain at break	30 / 45	%	ISO 527-1/-2
Charpy impact strength (+23°C)	N / N	kJ/m ²	ISO 179/1eU
Charpy impact strength (-30°C)	N / N	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	6 / 9	kJ/m ²	ISO 179/1eA
Charpy notched impact strength (-30°C)	7 / 6	kJ/m ²	ISO 179/1eA

Mechanical properties (TPE)	dry / cond	Unit	Test Standard
Ball indentation hardness	110 / 80	MPa	ISO 2039-1

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature (10°C/min)	200 / -	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	50 / -	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	125 / -	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	110 / -	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	80 / -	E-6/K	ISO 11359-1/-2
Burning Behav. at thickness h	HB / -	class	IEC 60695-11-10
Thickness tested	0.8 / -	mm	IEC 60695-11-10

Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity	1E9 / 1E9	Ohm*m	IEC 60093
Surface resistivity	- / 1E10	Ohm	IEC 60093
Electric strength	38 / 38	kV/mm	IEC 60243-1
Comparative tracking index	- / 600	-	IEC 60112

Other properties	dry / cond	Unit	Test Standard
Water absorption	2.1 / -	%	Sim. to ISO 62
Humidity absorption	1 / -	%	Sim. to ISO 62
Density	1040 / -	kg/m ³	ISO 1183

Characteristics

Processing

Extrusion - cast film, Other Extrusion

Product Attributes

High viscosity, Bio based Polyamide, Nucleated

Delivery form

Granules

Automotive

Powertrain and Chassis

Special Characteristics

Improved UV resistance (outdoor use), Improved heat resistance

Electricals & Electronics

Cables & Tubes, Connectors

Regional Availability

North America, Europe, Asia Pacific, South and Central America, Near East/Africa

Industry & Consumer goods

Housewares, Mechanical Engineering, Sports & Leisure, Tools & Accessories