

Grilamid XE 3915

PA12-GF50

EMS-GRIVORY | a unit of EMS-CHEMIE AG

Product Information

Product designation according to ISO 1874:

PA12, MHR, 18-120, GF50

Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	13000 / 11500	MPa	ISO 527-1/-2
Stress at break	155 / 135	MPa	ISO 527-1/-2
Strain at break	6 / 6	%	ISO 527-1/-2
Charpy impact strength (+23°C)	85 / 80	kJ/m ²	ISO 179/1eU
Charpy impact strength (-30°C)	85 / 80	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	21 / 20	kJ/m ²	ISO 179/1eA
Charpy notched impact strength (-30°C)	16 / 15	kJ/m ²	ISO 179/1eA

Mechanical properties (TPE)	dry / cond	Unit	Test Standard
Shore D hardness (15s)	- / 82	-	ISO 868
Ball indentation hardness	- / 155	MPa	ISO 2039-1

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature (10°C/min)	178 / -	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	165 / -	°C	ISO 75-1/-2
Temp. of deflection under load (8.0 MPa)	125 / -	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	15 / -	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	120 / -	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
Max. usage temperature (long term)	90 - 120	°C	EMS
Max. usage temperature (short term)	150	°C	EMS

Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity	- / 1E11	Ohm*m	IEC 60093
Surface resistivity	- / 1E12	Ohm	IEC 60093
Electric strength	- / 35	kV/mm	IEC 60243-1
Comparative tracking index	- / 600	-	IEC 60112

Other properties	dry / cond	Unit	Test Standard
Water absorption	0.8 / -	%	Sim. to ISO 62
Humidity absorption	0.4 / -	%	Sim. to ISO 62
Density	1470 / -	kg/m ³	ISO 1183

Rheo/Phys properties	dry / cond	Unit	Test Standard
Molding shrinkage (parallel)	0.1 / -	%	ISO 294-4, 2577
Molding shrinkage (normal)	0.5 / -	%	ISO 294-4, 2577

Characteristic
Processing

Injection Molding

Special Characteristics

High impact or impact modified, Improved UV resistance (outdoor use), Improved heat resistance

Automotive

Compressed air systems, Hydraulic systems, Automotive electr. and electronics, lighting, Exterior

Electricals & Electronics

Electrical appliances, Electrical equipment, Connectors, Mobile phones and other portable devices

Regional Availability

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

Industry & Consumer goods

Housewares, Mechanical Engineering, Medical devices, Power transmission, Sports & Leisure, Tools & Accessories