

**Grilamid XE 4159 nat**  
PA612

EMS-GRIVORY | a unit of EMS-CHEMIE AG

Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	<b>2500 / 2000</b>	MPa	ISO 527-1/-2
Charpy impact strength (+23°C)	<b>N / N</b>	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength (-30°C)	<b>N / N</b>	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength (+23°C)	<b>6 / 6</b>	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength (-30°C)	<b>3 / 3</b>	kJ/m <sup>2</sup>	ISO 179/1eA

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature (10°C/min)	<b>215 / -</b>	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	<b>75 / -</b>	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	<b>160 / -</b>	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	<b>80 / -</b>	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	<b>100 / -</b>	E-6/K	ISO 11359-1/-2
Burning Behav. at thickness h	<b>HB / -</b>	class	IEC 60695-11-10
Thickness tested	<b>0.8 / -</b>	mm	IEC 60695-11-10

Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity	<b>1E9 / 1E9</b>	Ohm*m	IEC 60093
Surface resistivity	<b>- / 1E10</b>	Ohm	IEC 60093
Electric strength	<b>34 / 32</b>	kV/mm	IEC 60243-1
Comparative tracking index	<b>- / 600</b>	-	IEC 60112

Other properties	dry / cond	Unit	Test Standard
Water absorption	<b>2.8 / -</b>	%	Sim. to ISO 62
Humidity absorption	<b>1.3 / -</b>	%	Sim. to ISO 62
Density	<b>1070 / -</b>	kg/m <sup>3</sup>	ISO 1183

Rheo/Phys properties	dry / cond	Unit	Test Standard
Molding shrinkage (parallel)	<b>0.8 / -</b>	%	ISO 294-4, 2577
Molding shrinkage (normal)	<b>0.8 / -</b>	%	ISO 294-4, 2577

**Characteristics**

**Processing**

Injection Molding

**Automotive**

Powertrain and Chassis

**Delivery form**

Granules

**Electricals & Electronics**

Electrical appliances

**Regional Availability**

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

**Industry & Consumer goods**

Housewares, Hydraulics & Pneumatics, Mechanical Engineering, Medical devices, Sports & Leisure, Tools & Accessories