

## Grilamid 2S 20 nat

### PA610

EMS-GRIVORY | a unit of EMS-CHEMIE AG

#### Product Texts

Product designation according to ISO 1874:  
PA 610, EM, 18-020

Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	<b>2200 / 1300</b>	MPa	ISO 527-1/-2
Yield stress	<b>65 / 50</b>	MPa	ISO 527-1/-2
Yield strain	<b>5 / 20</b>	%	ISO 527-1/-2
Nominal strain at break	<b>&gt;50 / &gt;50</b>	%	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>7 / 13</b>	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength (-30°C)	<b>5 / 5</b>	kJ/m <sup>2</sup>	ISO 179/1eA

Mechanical properties (TPE)	dry / cond	Unit	Test Standard
Ball indentation hardness	<b>128 / 82</b>	MPa	ISO 2039-1

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature (10°C/min)	<b>223 / -</b>	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	<b>55 / -</b>	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	<b>140 / -</b>	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	<b>110 / -</b>	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	<b>90 / -</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
Max. usage temperature (long term)	<b>80</b>	°C	ISO 2578
Max. usage temperature (short term)	<b>170</b>	°C	EMS

Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity	<b>1E8 / 1E9</b>	Ohm*m	IEC 60093
Surface resistivity	<b>- / 1E10</b>	Ohm	IEC 60093
Electric strength	<b>35 / 30</b>	kV/mm	IEC 60243-1
Comparative tracking index	<b>- / 600</b>	-	IEC 60112

Other properties	dry / cond	Unit	Test Standard
Water absorption	<b>3.9 / -</b>	%	Sim. to ISO 62
Humidity absorption	<b>1.7 / -</b>	%	Sim. to ISO 62
Density	<b>1080 / -</b>	kg/m <sup>3</sup>	ISO 1183

Rheo/Phys properties	dry / cond	Unit	Test Standard
Molding shrinkage (parallel)	<b>1.3 / -</b>	%	ISO 294-4, 2577
Molding shrinkage (normal)	<b>1.4 / -</b>	%	ISO 294-4, 2577

#### Characteristics

##### Processing

Extrusion - cast film, Other Extrusion

##### Product Attributes

High viscosity, Bio based Polyamide

##### Delivery form

Granules

##### Industry & Consumer goods

Housewares, Mechanical Engineering, Tools & Accessories

**Regional Availability**

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

**Food Contact**

EU Requirements, FDA