

**Grilon TSG-60/4 W**

PA666-GF60

EMS-GRIVORY | a unit of EMS-CHEMIE AG

**Product Texts**

Product designation according to ISO 1874:

PA 66+PA 6, MHR, 14-160 N, GF 60

Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	<b>20000 / 13000</b>	MPa	ISO 527-1/-2
Stress at break	<b>242 / 159</b>	MPa	ISO 527-1/-2
Strain at break	<b>2.2 / 3.6</b>	%	ISO 527-1/-2
Charpy impact strength (+23°C)	<b>86 / 91</b>	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength (-30°C)	<b>86 / 76</b>	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength (+23°C)	<b>13 / 18</b>	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength (-30°C)	<b>11.5 / 11</b>	kJ/m <sup>2</sup>	ISO 179/1eA

Mechanical properties (TPE)	dry / cond	Unit	Test Standard
Ball indentation hardness	<b>317 / 198</b>	MPa	ISO 2039-1

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature (10°C/min)	<b>265 / -</b>	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	<b>245 / -</b>	°C	ISO 75-1/-2
Temp. of deflection under load (8.00 MPa)	<b>210 / -</b>	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	<b>13 / -</b>	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	<b>87 / -</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>130 - 150</b>	°C	ISO 2578
Max. usage temperature (short term)	<b>230</b>	°C	EMS

Other properties	dry / cond	Unit	Test Standard
Water absorption	<b>5 / -</b>	%	Sim. to ISO 62
Humidity absorption	<b>1.2 / -</b>	%	Sim. to ISO 62
Density	<b>1720 / -</b>	kg/m <sup>3</sup>	ISO 1183

Rheo/Phys properties	dry / cond	Unit	Test Standard
Molding shrinkage (parallel)	<b>0.1 / -</b>	%	ISO 294-4, 2577
Molding shrinkage (normal)	<b>0.3 / -</b>	%	ISO 294-4, 2577

**Characteristics**

**Processing**

Injection Molding

**Delivery form**

Granules

**Special Characteristics**

Improved heat resistance

**Regional Availability**

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

**Automotive**

Air intake systems, Hydraulic systems, Automotive electr. and electronics, lighting, Cooling and climate control

**Electricals & Electronics**

Lighting

**Industry & Consumer goods**

Heating systems, Hydraulics & Pneumatics, Mechanical Engineering, Sports & Leisure