

**Grivory XE 4065 black 9238**

PA\*-GF50

EMS-GRIVORY | a unit of EMS-CHEMIE AG

**Product Texts**

Product designation according to ISO 1874:

PA 10T/X, MH, 14-100, GF50

Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	<b>16000 / 16000</b>	MPa	ISO 527-1/-2
Stress at break	<b>230 / 220</b>	MPa	ISO 527-1/-2
Strain at break	<b>2.5 / 2.5</b>	%	ISO 527-1/-2
Charpy impact strength (+23°C)	<b>90 / 80</b>	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength (-30°C)	<b>90 / 80</b>	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength (+23°C)	<b>12 / 12</b>	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength (-30°C)	<b>12 / 12</b>	kJ/m <sup>2</sup>	ISO 179/1eA

Mechanical properties (TPE)	dry / cond	Unit	Test Standard
Ball indentation hardness	<b>245 / 245</b>	MPa	ISO 2039-1

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature (10°C/min)	<b>295 / -</b>	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	<b>270 / -</b>	°C	ISO 75-1/-2
Temp. of deflection under load (8.00 MPa)	<b>225 / -</b>	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	<b>15 / -</b>	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	<b>60 / -</b>	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm nom. thickn.	<b>HB / -</b>	class	IEC 60695-11-10
Thickness tested	<b>1.5 / -</b>	mm	IEC 60695-11-10
Burning Behav. at thickness h	<b>HB / -</b>	class	IEC 60695-11-10
Thickness tested	<b>0.4 / -</b>	mm	IEC 60695-11-10
Max. usage temperature (long term)	<b>150</b>	°C	ISO 2578
Max. usage temperature (short term)	<b>250</b>	°C	EMS

Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity	<b>1E10 / 1E10</b>	Ohm*m	IEC 60093
Surface resistivity	<b>- / 1E11</b>	Ohm	IEC 60093
Electric strength	<b>32 / 31</b>	kV/mm	IEC 60243-1
Comparative tracking index	<b>- / 600</b>	-	IEC 60112

Other properties	dry / cond	Unit	Test Standard
Water absorption	<b>1.7 / -</b>	%	Sim. to ISO 62
Humidity absorption	<b>0.8 / -</b>	%	Sim. to ISO 62
Density	<b>1580 / -</b>	kg/m <sup>3</sup>	ISO 1183

Rheo/Phys properties	dry / cond	Unit	Test Standard
Molding shrinkage (parallel)	<b>0.5 / -</b>	%	ISO 294-4, 2577
Molding shrinkage (normal)	<b>0.9 / -</b>	%	ISO 294-4, 2577

**Characteristics**
**Processing**

Injection Molding

**Product Attributes**

Hydrolysis resistant, Improved alcohol resistance, Bio based Polyamide, Partially aromatic Polyamide

**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, Compressed air systems, Hydraulic systems,  
Cooling and climate control, Fuel systems, Powertrain and Chassis  
, Interior**Electricals & Electronics**

Electrical equipment

**Industry & Consumer goods**Hydraulics & Pneumatics, Mechanical Engineering, Power  
transmission, Tools & Accessories