

**Grivory XE 4185 black 9453**

PA\*

EMS-GRIVORY | a unit of EMS-CHEMIE AG

**Product Texts**

Product designation according to ISO 1874:

PA 10T/X, MHF, 11-030

Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	<b>3000 / 3000</b>	MPa	ISO 527-1/-2
Stress at break	<b>60 / 60</b>	MPa	ISO 527-1/-2
Strain at break	<b>6.5 / 12</b>	%	ISO 527-1/-2
Charpy impact strength (+23°C)	<b>40 / 35</b>	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength (-30°C)	<b>35 / 30</b>	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength (+23°C)	<b>5 / 5</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

Mechanical properties (TPE)	dry / cond	Unit	Test Standard
Ball indentation hardness	<b>150 / 150</b>	MPa	ISO 2039-1

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature (10°C/min)	<b>315 / -</b>	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	<b>110 / -</b>	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	<b>185 / -</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>80 / -</b>	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm nom. thickn.	<b>V-0 / -</b>	class	IEC 60695-11-10
Thickness tested	<b>1.5 / -</b>	mm	IEC 60695-11-10
Burning Behav. at thickness h	<b>V-0 / -</b>	class	IEC 60695-11-10
Thickness tested	<b>0.4 / -</b>	mm	IEC 60695-11-10
Max. usage temperature (long term)	<b>140</b>	°C	ISO 2578
Max. usage temperature (short term)	<b>240</b>	°C	EMS

Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity	<b>1E9 / 1E9</b>	Ohm*m	IEC 60093
Surface resistivity	<b>- / 1E11</b>	Ohm	IEC 60093
Electric strength	<b>30 / 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>1180 / -</b>	kg/m <sup>3</sup>	ISO 1183

Rheo/Phys properties	dry / cond	Unit	Test Standard
Molding shrinkage (parallel)	<b>2.0 / -</b>	%	ISO 294-4, 2577
Molding shrinkage (normal)	<b>2.0 / -</b>	%	ISO 294-4, 2577

**Characteristics**
**Processing**

Injection Molding

**Automotive**

Air intake systems, Compressed air systems, Hydraulic systems, Automotive electr. and electronics, lighting, Fuel systems, Interior

**Delivery form**

Granules

**Special Characteristics**

Flame retardant, Improved heat resistance

**Regional Availability**

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

**Product Attributes**

Hydrolysis resistant, Improved flowability and demoulding, Improved alcohol resistance, Bio based Polyamide, Co Polyamide, Partially aromatic Polyamide

**Electricals & Electronics**

Electrical appliances, Electrical equipment, Connectors, Energy distribution, Lighting, Mobile phones and other portable devices

**Industry & Consumer goods**

Hydraulics &amp; Pneumatics, Mechanical Engineering, Power transmission, Tools &amp; Accessories

**Burning Behaviour**

UL V0