

Grilamid TR XE 4139 black 9231

PA*

EMS-GRIVORY | a unit of EMS-CHEMIE AG

Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	2800 / 2800	MPa	ISO 527-1/-2
Yield stress	105 / 95	MPa	ISO 527-1/-2
Yield strain	7 / 6	%	ISO 527-1/-2
Strain at break	25 / >50	%	ISO 527-1/-2
Charpy impact strength (+23°C)	N / N	kJ/m ²	ISO 179/1eU
Charpy impact strength (-30°C)	N / N	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	11 / 12	kJ/m ²	ISO 179/1eA
Charpy notched impact strength (-30°C)	11 / 12	kJ/m ²	ISO 179/1eA

Mechanical properties (TPE)	dry / cond	Unit	Test Standard
Ball indentation hardness	160 / 160	MPa	ISO 2039-1

Thermal properties	dry / cond	Unit	Test Standard
Glass transition temperature (10°C/min)	160 / -	°C	ISO 11357-1/-2
Temp. of deflection under load (1.80 MPa)	125 / -	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	135 / -	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	60 / -	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	60 / -	E-6/K	ISO 11359-1/-2
Burning Behav. at thickness h	V-2 / -	class	IEC 60695-11-10
Thickness tested	0.8 / -	mm	IEC 60695-11-10
Max. usage temperature (long term)	80 - 100	°C	EMS
Max. usage temperature (short term)	120	°C	EMS

Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity	1E11 / 1E11	Ohm*m	IEC 60093
Surface resistivity	- / 1E12	Ohm	IEC 60093
Electric strength	27 / 27	kV/mm	IEC 60243-1
Comparative tracking index	- / 600	-	IEC 60112

Other properties	dry / cond	Unit	Test Standard
Water absorption	9 / -	%	Sim. to ISO 62
Humidity absorption	3.5 / -	%	Sim. to ISO 62
Density	1150 / -	kg/m ³	ISO 1183

Rheo/Phys properties	dry / cond	Unit	Test Standard
Molding shrinkage (parallel)	0.7 / -	%	ISO 294-4, 2577
Molding shrinkage (normal)	0.7 / -	%	ISO 294-4, 2577

Characteristics
Processing

Injection Molding

Delivery form

Granules

Additives

Release agent

Product Attributes

Barrier Properties, Hydrolysis resistant, Co Polyamide, Partially aromatic Polyamide, Transparent Polyamide

Automotive

Fuel systems

Industry & Consumer goods

Hydraulics & Pneumatics, Mechanical Engineering, Sanitary, water and gas supply, Tools & Accessories

Special Characteristics

Improved UV resistance (outdoor use), Improved heat resistance, Transparent

Burning Behaviour

UL V2

Regional Availability

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