

Grilamid TR 90 TL
 PAMACM12

EMS-GRIVORY | a unit of EMS-CHEMIE AG

Product Texts

 Product designation according to ISO 1874:
 PA MACM12,MACMI/MACMT/12,12, GT, 11-20

Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	- / 1850	MPa	ISO 527-1/-2
Yield stress	- / 75	MPa	ISO 527-1/-2
Yield strain	- / 7	%	ISO 527-1/-2
Stress at break	- / 55	MPa	ISO 527-1/-2
Strain at break	- / >50	%	ISO 527-1/-2
Charpy impact strength (+23°C)	- / N	kJ/m ²	ISO 179/1eU
Charpy impact strength (-30°C)	- / N	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	- / 10	kJ/m ²	ISO 179/1eA
Charpy notched impact strength (-30°C)	- / 11	kJ/m ²	ISO 179/1eA

Mechanical properties (TPE)	dry / cond	Unit	Test Standard
Ball indentation hardness	- / 120	MPa	ISO 2039-1

Thermal properties	dry / cond	Unit	Test Standard
Glass transition temperature (10°C/min)	135 / -	°C	ISO 11357-1/-2
Temp. of deflection under load (1.80 MPa)	90 / -	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	110 / -	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	95 / -	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	95 / -	E-6/K	ISO 11359-1/-2
Burning Behav. at thickness h	HB / -	class	IEC 60695-11-10
Thickness tested	0.8 / -	mm	IEC 60695-11-10
Max. usage temperature (long term)	80 - 100	°C	ISO 2578
Max. usage temperature (short term)	110	°C	EMS

Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity	- / 1E11	Ohm*m	IEC 60093
Surface resistivity	- / 1E12	Ohm	IEC 60093
Electric strength	- / 33	kV/mm	IEC 60243-1
Comparative tracking index	- / 600	-	IEC 60112

Other properties	dry / cond	Unit	Test Standard
Water absorption	2.5 / -	%	Sim. to ISO 62
Humidity absorption	2 / -	%	Sim. to ISO 62
Density	1020 / -	kg/m ³	ISO 1183

Rheo/Phys properties	dry / cond	Unit	Test Standard
Molding shrinkage (parallel)	0.5 / -	%	ISO 294-4, 2577
Molding shrinkage (normal)	0.6 / -	%	ISO 294-4, 2577

Characteristics
Processing

Injection Molding

Delivery form

Granules

Product Attributes

Hydrolysis resistant, Co Polyamide, Transparent Polyamide

Automotive

Compressed air systems, Fuel systems, Exterior



Additives

Lubricants

Special Characteristics

High impact or impact modified

Regional Availability

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

Electricals & Electronics

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

Industry & Consumer goods

Housewares, Hydraulics & Pneumatics, Mechanical Engineering, Medical devices

