

Grilamid LV-2H PA12-GF20

EMS-GRIVORY | a unit of EMS-CHEMIE AG

Product Texts

Product designation according to ISO 1874:

PA12, MHR, 18-050, GF20

Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	5500 / 4400	MPa	ISO 527-1/-2
Stress at break	105 / 90	MPa	ISO 527-1/-2
Strain at break	7 / 10	%	ISO 527-1/-2
Charpy impact strength (+23°C)	80 / 75	kJ/m²	ISO 179/1eU
Charpy impact strength (-30°C)	- / 75	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	- / 20	kJ/m²	ISO 179/1eA
Charpy notched impact strength (-30°C)	- / 15	kJ/m²	ISO 179/1eA

Mechanical properties (TPE)	dry / cond	Unit	Test Standard	
Shore D hardness (15s)	- / 74	-	ISO 868	

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature (10°C/min)	178 / -	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	150 / -	°C	ISO 75-1/-2
Temp. of deflection under load (8.00 MPa)	80 / -	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	30 / -	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	150 / -	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)	90 - 120	°C	ISO 2578
Max. usage temperature (short term)	150	С°	EMS

Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity	- / 1E11	Ohm*m	IEC 60093
Surface resistivity	- / 1E12	Ohm	IEC 60093
Electric strength	- / 35	kV/mm	IEC 60243-1
Comparative tracking index	- / 600	-	IEC 60112

Other properties	dry / cond	Unit	Test Standard
Water absorption	1.2 / -	%	Sim. to ISO 62
Humidity absorption	0.6 / -	%	Sim. to ISO 62
Density	1160 / -	kg/m³	ISO 1183

Rheo/Phys properties	dry / cond	Unit	Test Standard
Molding shrinkage (parallel)	0.1 / -	%	ISO 294-4, 2577
Molding shrinkage (normal)	0.7 / -	%	ISO 294-4, 2577

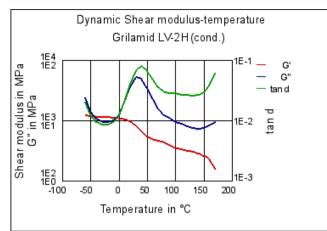
Diagrams

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Dynamic Shear modulus-temperature



Characteristics

Processing

Injection Molding

Delivery form

Granules

Special Characteristics

High impact or impact modified

Regional Availability

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

Product Attributes

Hydrolysis resistant

Automotive

Air intake sytems, Compressed air systems, Hydraulic systems, Automotive electr. and electronics, lighting, Cooling and climate control, Fuel systems, Powertrain and Chassis

Electricals & Electronics

Electrical appliances, Connectors, Mobile phones and other portable devices

Industry & Consumer goods

Heating systems, Housewares, Hydraulics & Pneumatics, Mechanical Engineering, Medical devices, Power transmission, Sanitary, water and gas supply, Sports & Leisure, Tools & Accessories

Chemical Media Resistance

Acids

- 🙂 Acetic Acid (5% by mass) (23°C)
- Citric Acid solution (10% by mass) (23°C)
- 🙂 🛛 Lactic Acid (10% by mass) (23°C)
- Hydrochloric Acid (36% by mass) (23°C)
- Nitric Acid (40% by mass) (23°C)
- 😬 Sulfuric Acid (38% by mass) (23°C)
- Unite Acid (5% by mass) (23°C)
- Chromic Acid solution (40% by mass) (23°C)

Bases

•••

Sodium Hydroxide solution (35% by mass) (23°C)

Sodium Hydroxide solution (1% by mass) (23°C)

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•••	Ammonium Hydroxide solution (10% by mass) (23°C)
Alcoh	nols
\odot	Isopropyl alcohol (23°C)
\odot	Methanol (23°C)
\odot	Ethanol (23°C)
Hydro	ocarbons
\odot	n-Hexane (23°C)
\odot	Toluene (23°C)
\odot	iso-Octane (23°C)
Ketor	nes
\odot	Acetone (23°C)
Ether	S
\odot	Diethyl ether (23°C)
Miner	al oils
\odot	SAE 10W40 multigrade motor oil (23°C)
•••	SAE 10W40 multigrade motor oil (130°C)
\odot	SAE 80/90 hypoid-gear oil (130°C)
\odot	Insulating Oil (23°C)
Stand	lard Fuels
\odot	ISO 1817 Liquid 1 (60°C)
\odot	ISO 1817 Liquid 2 (60°C)
\odot	ISO 1817 Liquid 3 (60°C)
	ISO 1817 Liquid 4 (60°C)
	Standard fuel without alcohol (pref. ISO 1817 Liquid C) (23°C)
	Standard fuel with alcohol (pref. ISO 1817 Liquid 4) (23°C)
	Diesel fuel (pref. ISO 1817 Liquid F) (23°C)
	Diesel fuel (pref. ISO 1817 Liquid F) (90°C)
	Diesel fuel (pref. ISO 1817 Liquid F) (>90°C)
	olutions
	Sodium Chloride solution (10% by mass) (23°C)
	Sodium Hypochlorite solution (10% by mass) (23°C)
	Sodium Carbonate solution (20% by mass) (23°C)
	Sodium Carbonate solution (2% by mass) (23°C)
<u></u>	Zinc Chloride solution (50% by mass) (23°C)
Other	
	Ethyl Acetate (23°C)
	Hydrogen peroxide (23°C)
	DOT No. 4 Brake fluid (130°C)
	Ethylene Glycol (50% by mass) in water (108°C)
	1% nonylphenoxy-polyethyleneoxy ethanol in water (23°C)
•••	50% Oleic acid + 50% Olive Oil (23°C)

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Ueionized water (90°C)

Phenol solution (5% by mass) (23°C)

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