

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/m ²	ISO 179/1eU
Charpy impact strength (-30°C)	- / 75	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	- / 20	kJ/m ²	ISO 179/1eA
Charpy notched impact strength (-30°C)	- / 15	kJ/m ²	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	°C	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

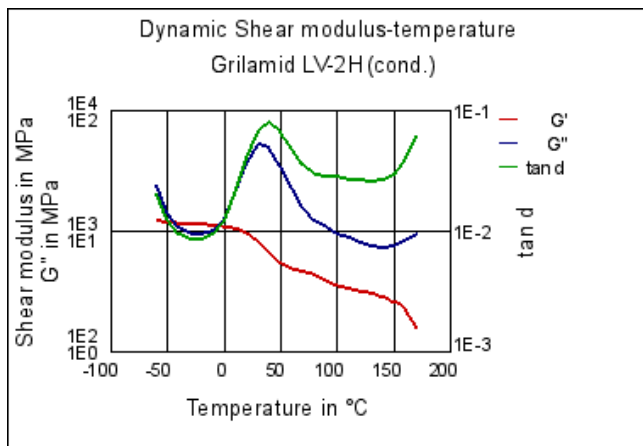
Other properties	dry / cond	Unit	Test Standard
Water absorption	1.2 / -	%	Sim. to ISO 62
Humidity absorption	0.6 / -	%	Sim. to ISO 62
Density	1160 / -	kg/m ³	ISO 1183

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



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)
- 😊 Sulfuric 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)



☺ Ammonium Hydroxide solution (10% by mass) (23°C)

Alcohols

☺ Isopropyl alcohol (23°C)
☺ Methanol (23°C)
☺ Ethanol (23°C)

Hydrocarbons

☺ n-Hexane (23°C)
☺ Toluene (23°C)
☺ iso-Octane (23°C)

Ketones

☺ Acetone (23°C)

Ethers

☺ Diethyl ether (23°C)

Mineral oils

☺ SAE 10W40 multigrade motor oil (23°C)
☺ SAE 10W40 multigrade motor oil (130°C)
☺ SAE 80/90 hypoid-gear oil (130°C)
☺ Insulating Oil (23°C)

Standard Fuels

☺ ISO 1817 Liquid 1 (60°C)
☺ ISO 1817 Liquid 2 (60°C)
☺ 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)

Salt solutions

☺ 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)
☺ 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)





Water (23°C)



Deionized water (90°C)



Phenol solution (5% by mass) (23°C)

