

Grilamid LV-50H FWA nat
PA12-GF50

EMS-GRIVORY | a unit of EMS-CHEMIE AG

Product Texts

Product designation according to ISO 1874:

PA12, MH, 18-120, GF50

Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	12000 / 11500	MPa	ISO 527-1/-2
Stress at break	155 / 135	MPa	ISO 527-1/-2
Strain at break	5 / 6	%	ISO 527-1/-2
Charpy impact strength (+23°C)	90 / 80	kJ/m ²	ISO 179/1eU
Charpy impact strength (-30°C)	90 / 80	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	19 / 20	kJ/m ²	ISO 179/1eA
Charpy notched impact strength (-30°C)	15 / 15	kJ/m ²	ISO 179/1eA

Mechanical properties (TPE)	dry / cond	Unit	Test Standard
Shore D hardness (15s)	- / 82	-	ISO 868
Ball indentation hardness	- / 155	MPa	ISO 2039-1

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)	165 / -	°C	ISO 75-1/-2
Temp. of deflection under load (8.00 MPa)	125 / -	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	15 / -	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	120 / -	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

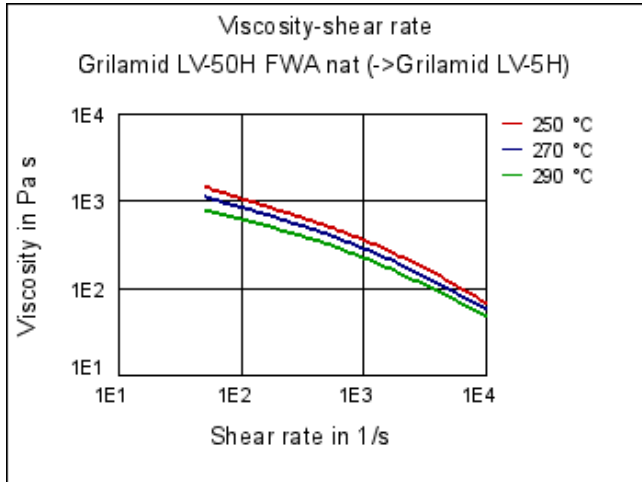
Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity	- / 1E11	Ohm*m	IEC 60093
Surface resistivity	- / 1E12	Ohm	IEC 60093
Electric strength	- / 35	kV/mm	IEC 60243-1
Comparative tracking index	- / 600	-	IEC 60112

Other properties	dry / cond	Unit	Test Standard
Water absorption	0.8 / -	%	Sim. to ISO 62
Humidity absorption	0.4 / -	%	Sim. to ISO 62
Density	1470 / -	kg/m ³	ISO 1183

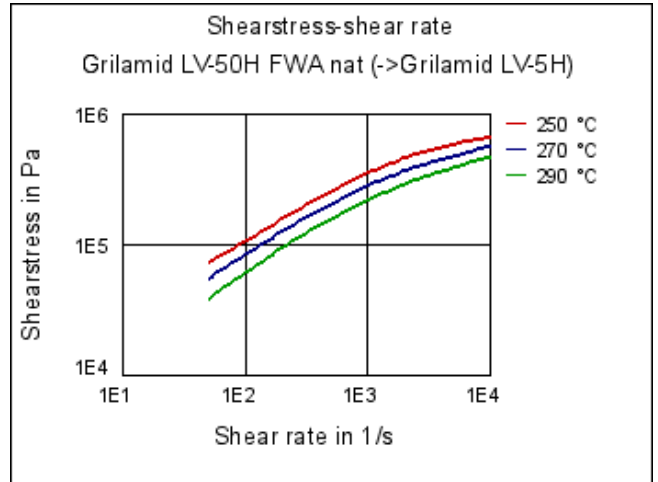
Rheo/Phys properties	dry / cond	Unit	Test Standard
Molding shrinkage (parallel)	0.1 / -	%	ISO 294-4, 2577
Molding shrinkage (normal)	0.5 / -	%	ISO 294-4, 2577

Diagrams

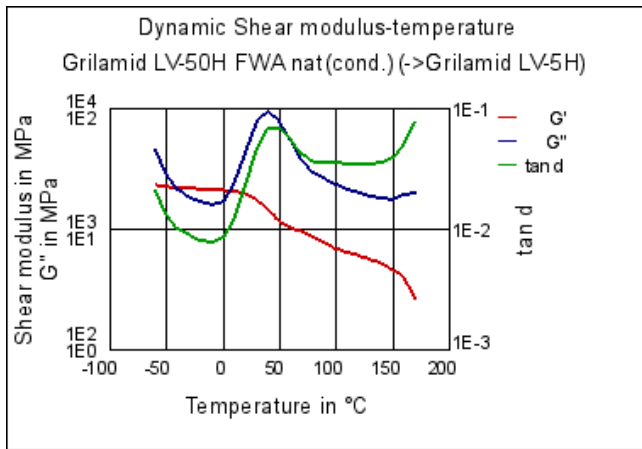
Viscosity-shear rate



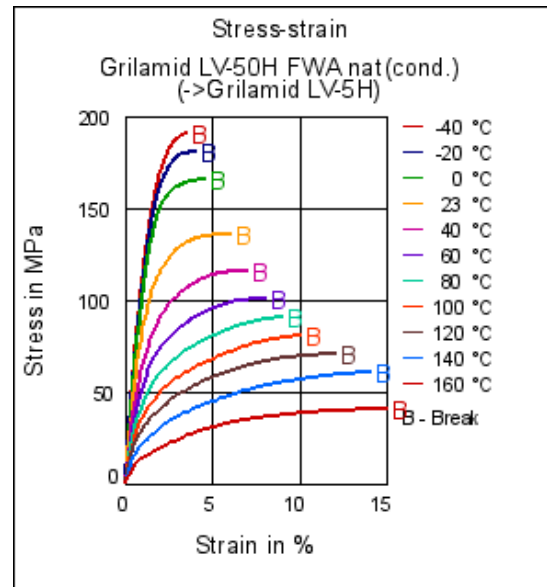
Shearstress-shear rate



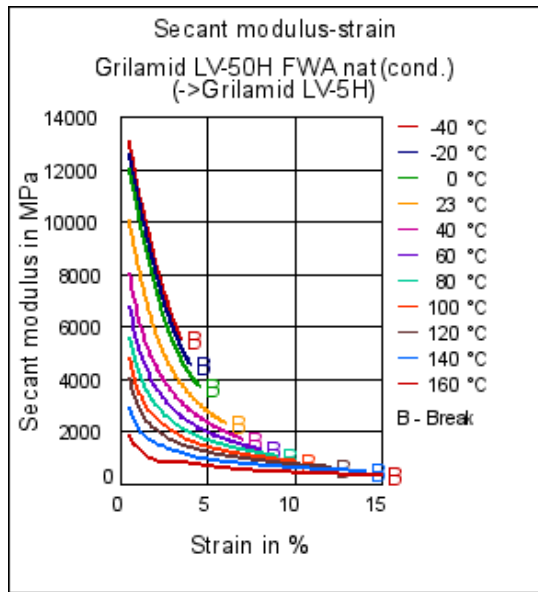
Dynamic Shear modulus-temperature



Stress-strain



Secant modulus-strain



Characteristics

Processing

Injection Molding

Delivery form

Granules

Special Characteristics

High impact or impact modified, Improved UV resistance (outdoor use), Improved heat resistance

Regional Availability

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

Product Attributes

Hydrolysis resistant

Industry & Consumer goods

Heating systems, Housewares, Sanitary, water and gas supply

Food Contact

NSF 51, EU Requirements, FDA

Potable Water Contact

NSF 61, KTW, WRAS, ACS, DVGW W270