

Grilamid L 25 W 20 Y black 9992

PA12-I

EMS-GRIVORY

Product Texts

Product-nomenclature: ISO 16396-PA12-IP,,EHL1,C22-005

Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	600 / 500	MPa	ISO 527-1/-2
Yield stress	30 / 30	MPa	ISO 527-1/-2
Yield strain	20 / 20	%	ISO 527-1/-2
Nominal strain at break	>50 / >50	%	ISO 527-1/-2
Strain at break	>50 / >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)	65 / N	kJ/m ²	ISO 179/1eA
Charpy notched impact strength (-30°C)	6 / 7	kJ/m ²	ISO 179/1eA

Mechanical properties (TPE)	dry / cond	Unit	Test Standard
Ball indentation hardness	- / 40	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)	45 / -	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	95 / -	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	140 / -	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	180 / -	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)	95	°C	ISO 2578
Max. usage temperature (short term)	150	°C	EMS

Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity	- / 1E11	Ohm*m	IEC 62631-3-1
Surface resistivity	- / 1E12	Ohm	IEC 62631-3-2
Electric strength	- / 32	kV/mm	IEC 60243-1
Comparative tracking index	- / 600	-	IEC 60112

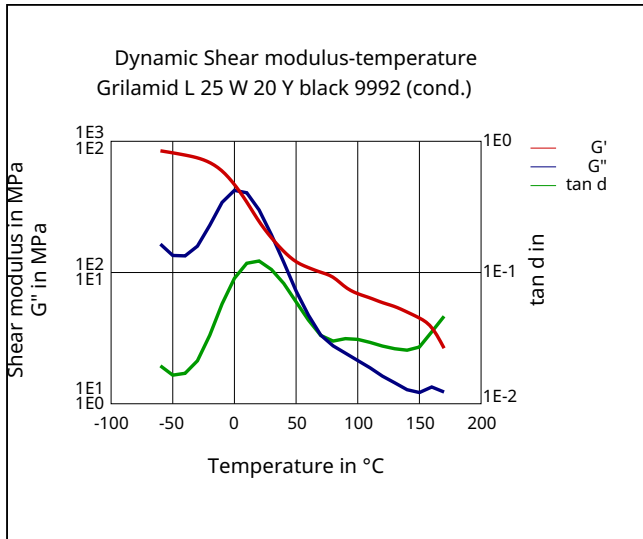
Other properties	dry / cond	Unit	Test Standard
Water absorption	1.5 / -	%	Sim. to ISO 62
Humidity absorption	0.7 / -	%	Sim. to ISO 62
Density	1020 / -	kg/m ³	ISO 1183

Rheo/Phys properties	dry / cond	Unit	Test Standard
Molding shrinkage (parallel)	0.8 / -	%	ISO 294-4, 2577
Molding shrinkage (normal)	1.2 / -	%	ISO 294-4, 2577

Processing Extrusion	Value	Unit	Test Standard
Length	24 - 26	-	-
Compression rate	2.5	-	-
Hopper zone	60 - 90	°C	-
Conveying zone	210 - 250	°C	-
Compression zone	220 - 250	°C	-
Metering zone	220 - 250	°C	-
Melt	220 - 250	°C	-
Die	220 - 250	°C	-
Adapter	220 - 250	°C	-

Diagrams

Dynamic Shear modulus-temperature



Characteristics

Processing

Other Extrusion

Delivery form

Granules

Additives

Plasticised

Special Characteristics

Improved impact resistance, Light stabilized or stable to light, Improved UV resistance (outdoor use), Improved heat resistance

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)

Regional Availability

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

Product Attributes

Highly flexible, High viscosity

Automotive

Air intake systems, Compressed air systems, Hydraulic systems, Fuel systems

Industry & Consumer goods

Hydraulics & Pneumatics

☺ 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)