TECHNICAL DATASHEET

Grilamid L 25 W 20 Y black 9992

PA12-I

EMS-GRIVORY
Material Database

Physical
Low density

Processing
Other extrusion

Delivery form
Granules

Special Characteristics
Light stabilized or stable to light

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

Product Information

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

Mechanical Properties	dry/cond	Unit	Standard
Tensile modulus	600 / 500	MPa	ISO 527
Yield stress	30 / 30	MPa	ISO 527
Yield strain	20 / 20	%	ISO 527
Nominal strain at break	>50 / >50	%	ISO 527
Charpy impact strength, +23°C	N / N	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	N / N	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C	65 / N	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	6 / 7	kJ/m²	ISO 179/1eA
Ball indentation hardness	- / 40	MPa	ISO 2039-1
Shore A hardness (15s)	- / 65	-	ISO 868

Thermal Properties	dry/cond	Unit	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
Max. usage temperature (long term)	95	°C	ISO 2578
Max. usage temperature (short term)	150	°C	EMS

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

General Properties	dry/cond	Unit	Standard
Density	1020 / -	kg/m³	ISO 1183
Burning behav. at thickness h	HB / -	class	IEC 60695-11-10

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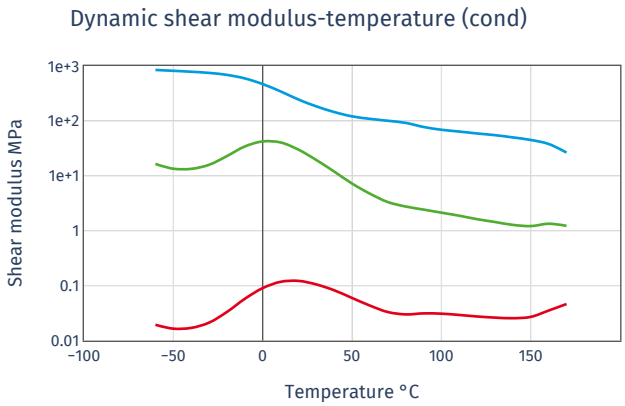
General Properties	dry/cond	Unit	Standard
Thickness tested	0.8 / -	mm	
Water absorption	1.5 / -	%	Sim. to ISO 62
Humidity absorption	0.7 / -	%	Sim. to ISO 62
Molding shrinkage, parallel	0.8 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	1.2 / -	%	ISO 294-4, 2577

Processing Extrusion	Value	Unit	Standard
Length	24 - 26	mm	
Compression ratio	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



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)

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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)

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