Grivory HTV-5H1 black 9205

PA6T/6I-GF50 EMS-GRIVORY | a unit of EMS-CHEMIE AG

Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	**18000 / 17500**	MPa	ISO 527-1/-2
Charpy impact strength (+23°C)	**80 / 80**	kJ/m²	ISO 179/1eU
Charpy impact strength (-30°C)	**80 / 80**	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	**11 / 11**	kJ/m²	ISO 179/1eA
Charpy notched impact strength (-30°C)	**10 / 10**	kJ/m²	ISO 179/1eA

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature (10°C/min)	**325 / -**	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	**285 / -**	°C	ISO 75-1/-2
Temp. of deflection under load (8.00 MPa)	**210 / -**	°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)	**40 / -**	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

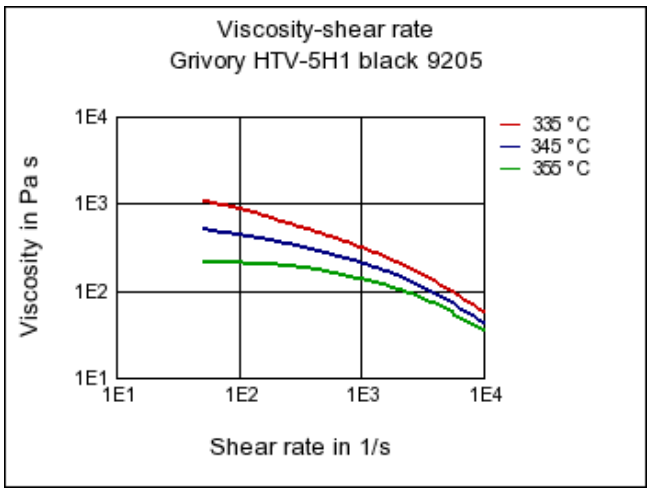
Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity	**1E11 / 1E11**	Ohm*m	IEC 60093
Surface resistivity	**- / 1E12**	Ohm	IEC 60093
Electric strength	**30 / 30**	kV/mm	IEC 60243-1
Comparative tracking index	**- / 600**	-	IEC 60112

Other properties	dry / cond	Unit	Test Standard
Water absorption	**3 / -**	%	Sim. to ISO 62
Humidity absorption	**1.3 / -**	%	Sim. to ISO 62
Density	**1650 / -**	kg/m³	ISO 1183

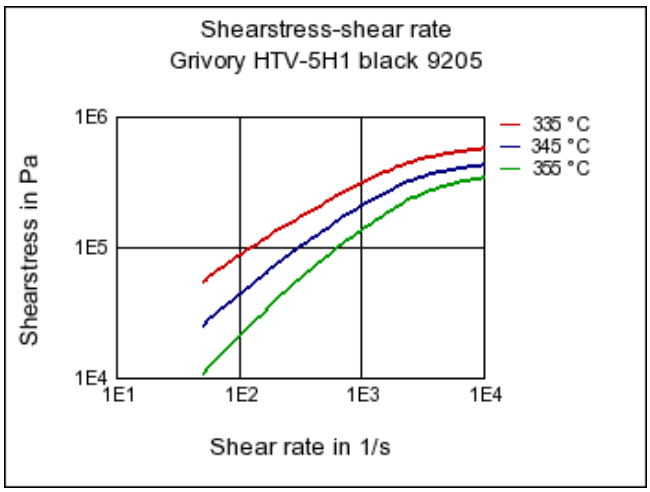
Rheo/Phys properties	dry / cond	Unit	Test Standard
Molding shrinkage (parallel)	**0.1 / -**	%	ISO 294-4, 2577
Molding shrinkage (normal)	**0.5 / -**	%	ISO 294-4, 2577

Diagrams

Viscosity-shear rate



Shearstress-shear rate



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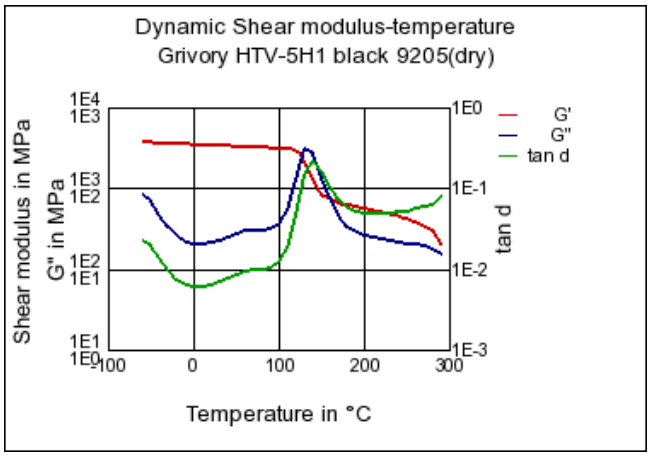
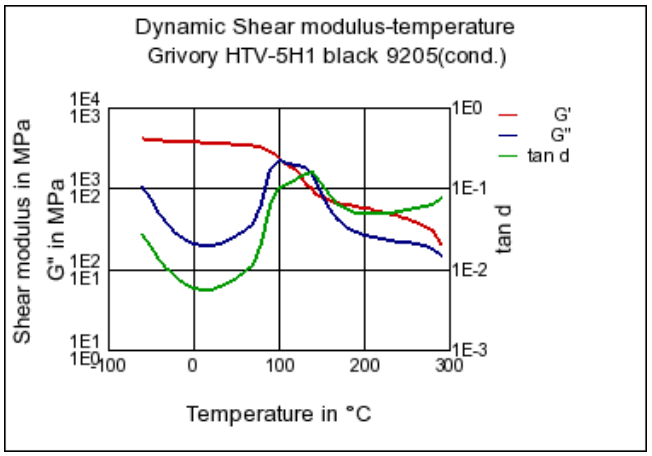
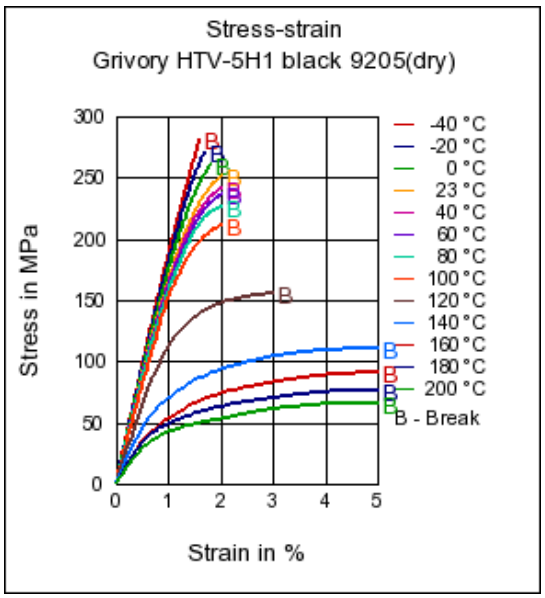
Dynamic Shear modulus-temperature



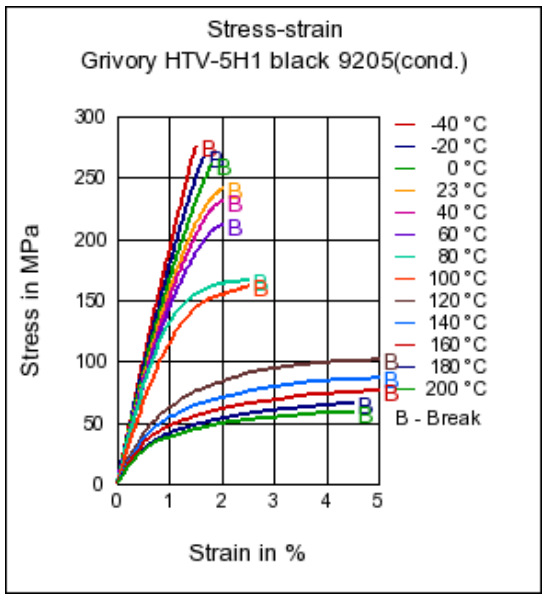
Dynamic Shear modulus-temperature



Stress-strain



Stress-strain



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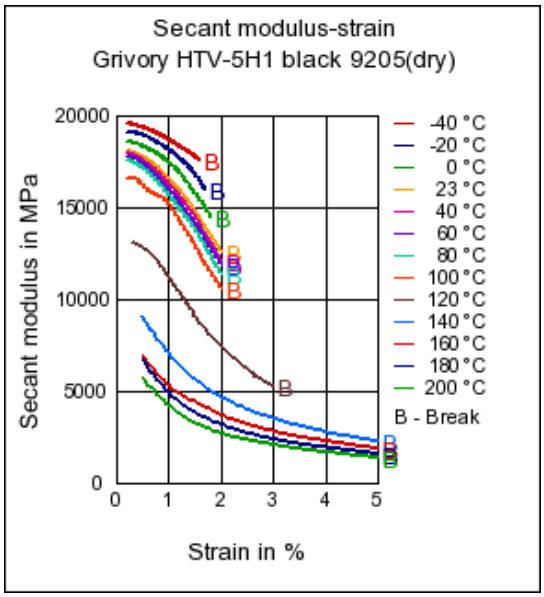
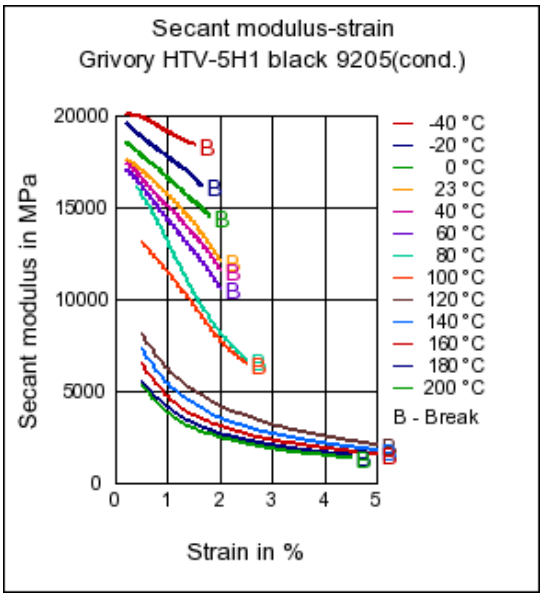
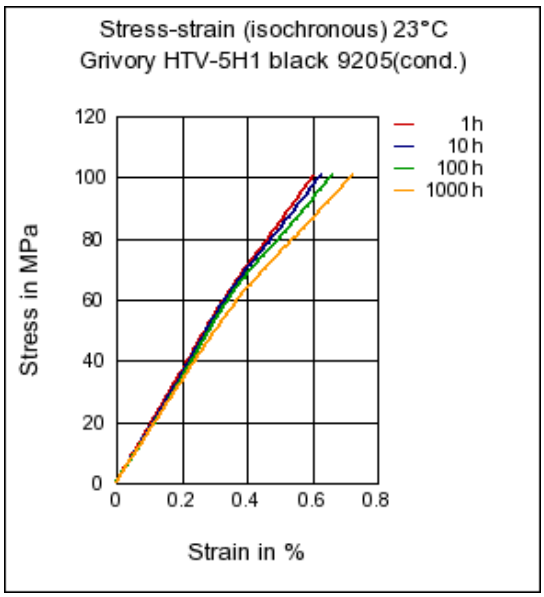
Secant modulus-strain



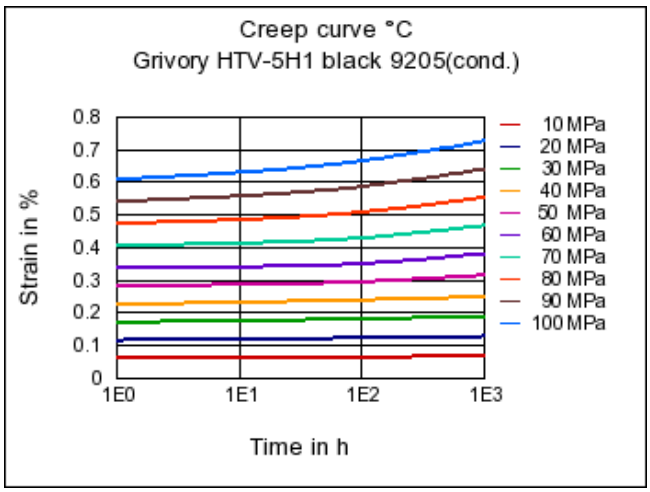
Secant modulus-strain



Stress-strain (isochronous) 23°C



Creep curve °C



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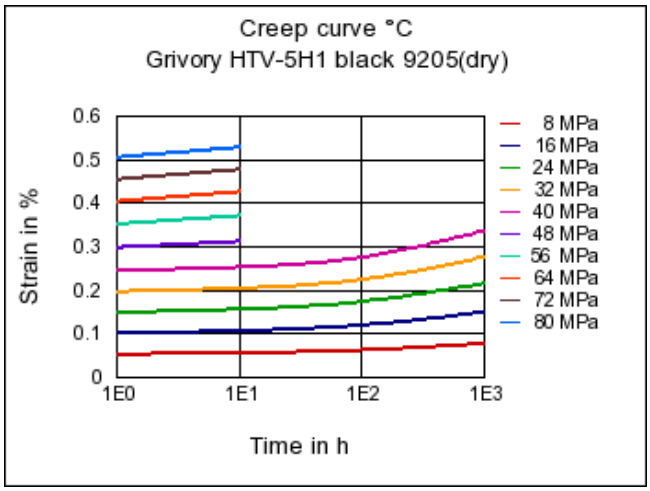
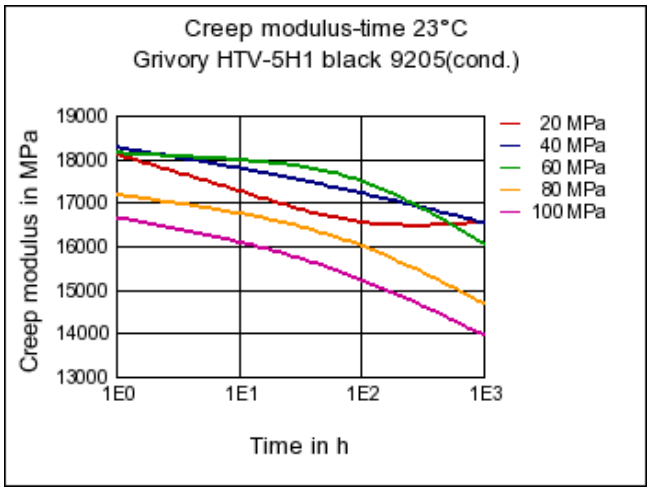
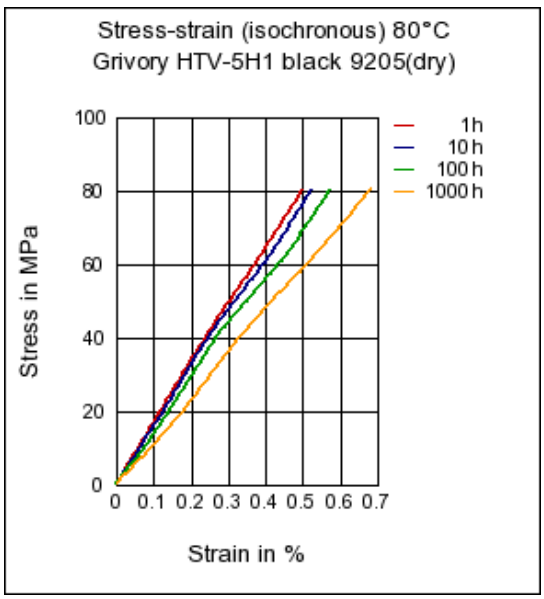


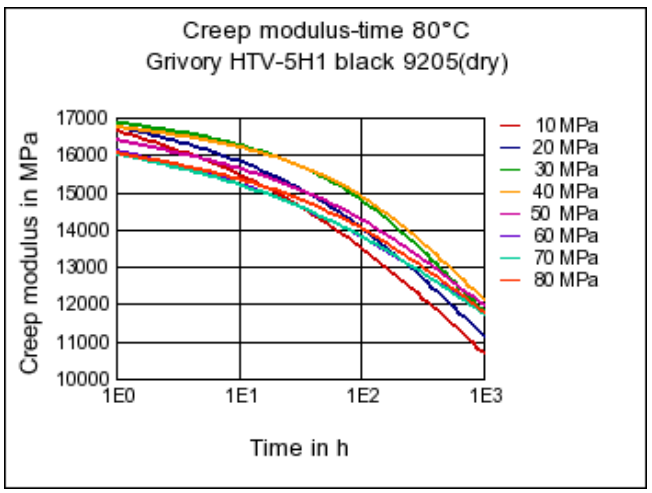
Creep modulus-time 23°C



Stress-strain (isochronous) 80°C



Creep modulus-time 80°C



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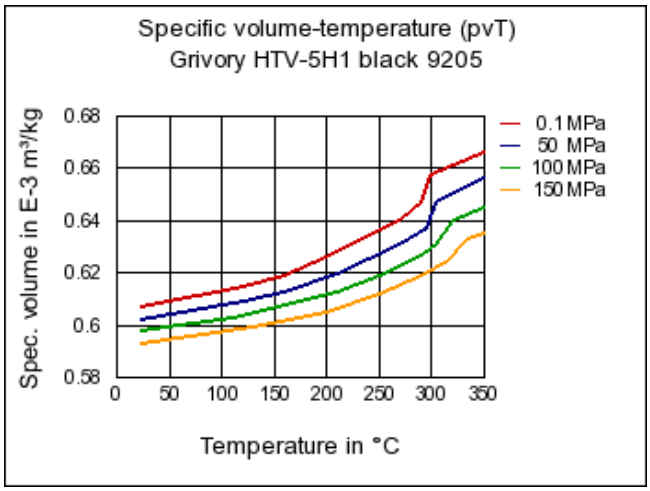
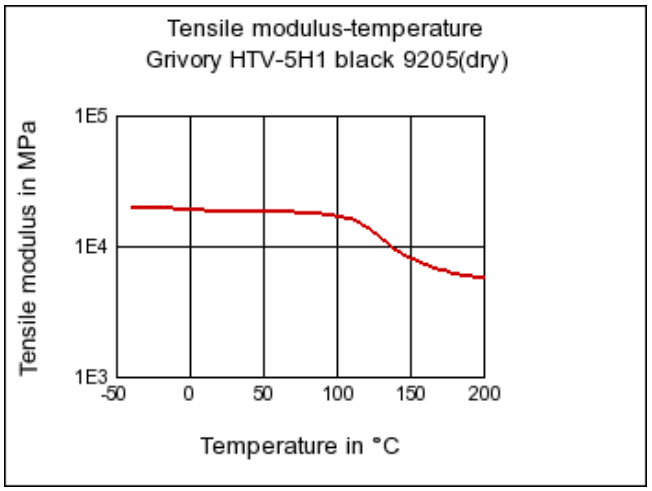
Specific volume-temperature (pvT)



Tensile modulus-temperature



Characteristics

Processing

Injection Molding

Delivery form

Granules

Special Characteristics

Improved UV resistance (outdoor use), Improved heat resistance

Regional Availability

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

Automotive

Fuel systems, Powertrain and Chassis , Interior, Exterior

Electricals & Electronics

Electrical appliances, Energy distribution

Industry & Consumer goods

Housewares, Hydraulics & Pneumatics, Mechanical Engineering, Power transmission, 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

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- 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)

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