

## Grivory G 21

PA6I/6T

EMS-GRIVORY | a unit of EMS-CHEMIE AG

Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	<b>3000 / 3000</b>	MPa	ISO 527-1/-2
Charpy notched impact strength (+23°C)	<b>8 / 8</b>	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength (-30°C)	<b>8 / 2</b>	kJ/m <sup>2</sup>	ISO 179/1eA

Thermal properties	dry / cond	Unit	Test Standard
Glass transition temperature (10°C/min)	<b>125 / -</b>	°C	ISO 11357-1/-2

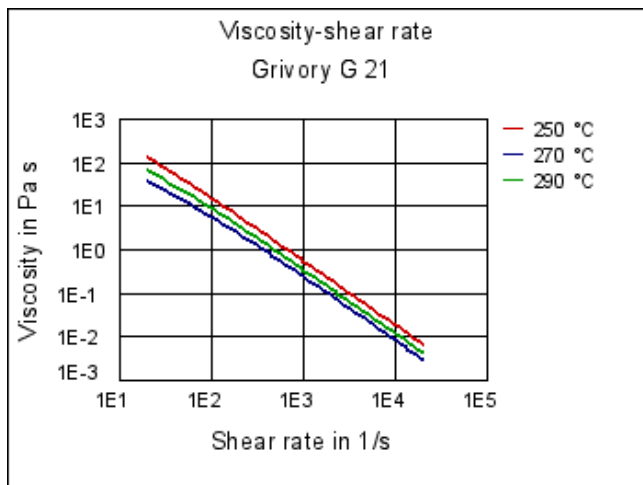
Other properties	dry / cond	Unit	Test Standard
Water absorption	<b>7 / -</b>	%	Sim. to ISO 62
Humidity absorption	<b>2 / -</b>	%	Sim. to ISO 62
Density	<b>1180 / -</b>	kg/m <sup>3</sup>	ISO 1183

Film Properties	dry / cond	Unit	Test Standard
Stress at yield (parallel)	<b>85 / -</b>	MPa	ISO 527-3
Stress at yield (normal)	<b>85 / -</b>	MPa	ISO 527-3
Strain at yield (parallel)	<b>5 / -</b>	%	ISO 527-3
Strain at yield (normal)	<b>5 / -</b>	%	ISO 527-3
Maximum strain (parallel)	<b>300 / -</b>	%	ISO 527-3
Maximum strain (normal)	<b>300 / -</b>	%	ISO 527-3
Elmendorf Tear resistance (parallel)	<b>10 / -</b>	N	ISO 6383-2
Elmendorf Tear resistance (normal)	<b>10 / -</b>	N	ISO 6383-2
Trouser Tear resistance (parallel)	<b>5 / -</b>	N/mm	ISO 6383-1
Trouser Tear resistance (normal)	<b>5 / -</b>	N/mm	ISO 6383-1
Gloss, 60°	<b>160 / -</b>	-	ISO 2813
WVTR (23°C/85%r.h.)	<b>7 / -</b>	g/(m <sup>2</sup> *d)	ISO 15106-1/-2
Oxygen transmission rate (23°C/0%r.h.)	<b>30 / -</b>	cm <sup>3</sup> /(m <sup>2</sup> *d*bar)	ISO 15105-1/-2
Oxygen transmission rate (23°C/85%r.h.)	<b>10 / -</b>	cm <sup>3</sup> /(m <sup>2</sup> *d*bar)	ISO 15105-1/-2
Carbon Dioxide transm. rate (23°C/0%r.h.)	<b>90 / -</b>	cm <sup>3</sup> /(m <sup>2</sup> *d*bar)	ISO 15105-1/-2
Carbon Dioxide transm. rate (23°C/85%r.h.)	<b>40 / -</b>	cm <sup>3</sup> /(m <sup>2</sup> *d*bar)	ISO 15105-1/-2

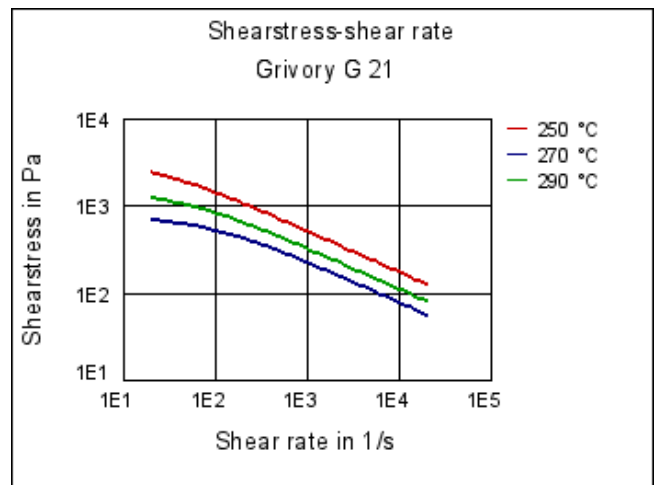
Rheo/Phys properties	dry / cond	Unit	Test Standard
Melt volume-flow rate (MVR)	<b>25 / -</b>	cm <sup>3</sup> /10min	ISO 1133
Temperature	<b>275 / -</b>	°C	ISO 1133
Load	<b>5 / -</b>	kg	ISO 1133

## Diagrams

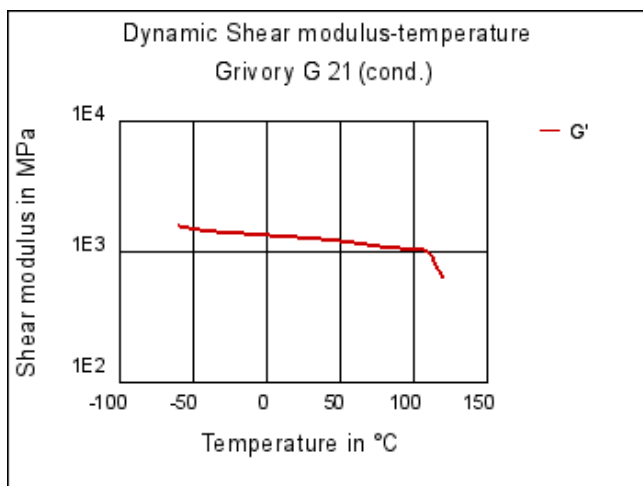
Viscosity-shear rate



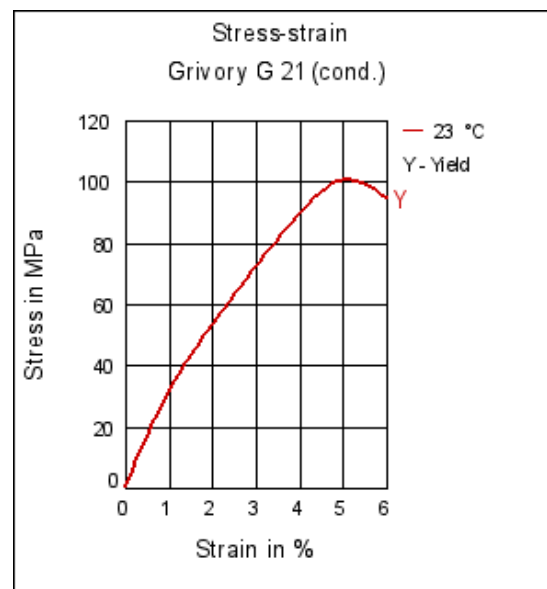
Shearstress-shear rate



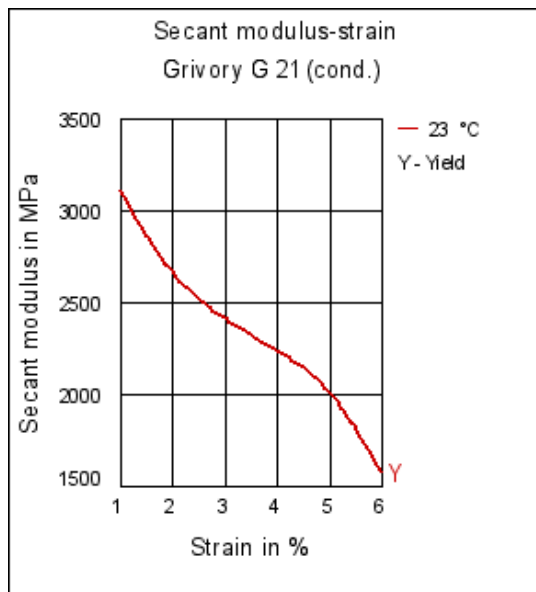
Dynamic Shear modulus-temperature



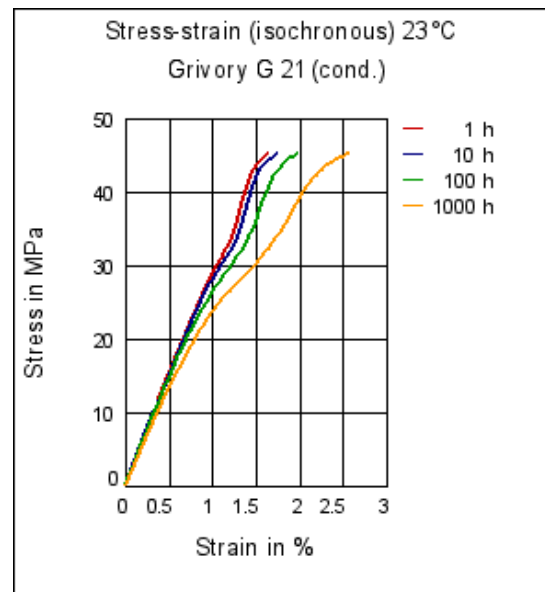
Stress-strain



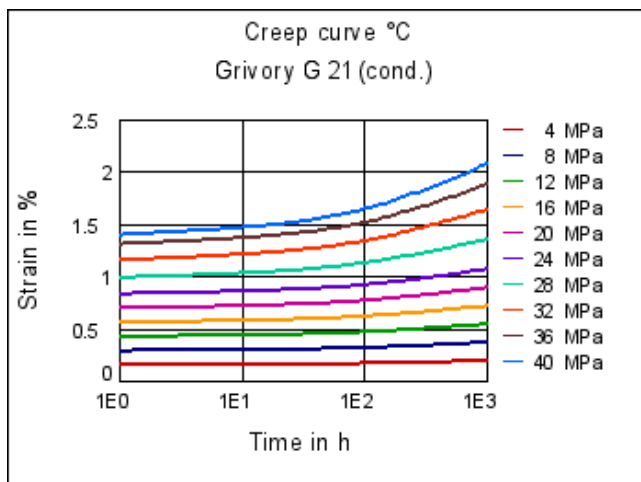
#### Secant modulus-strain



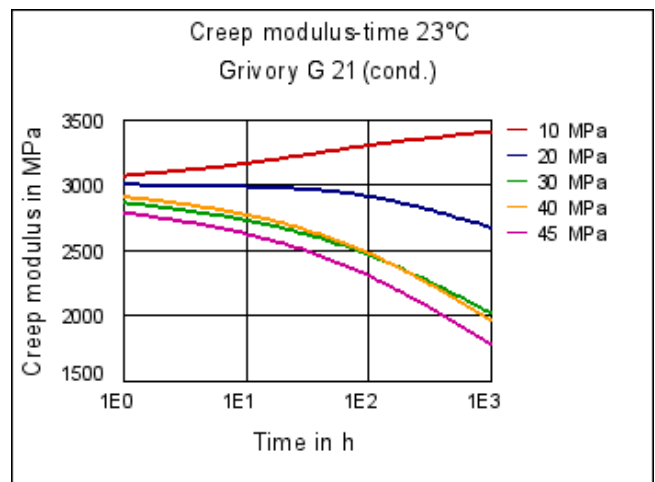
#### Stress-strain (isochronous) 23°C



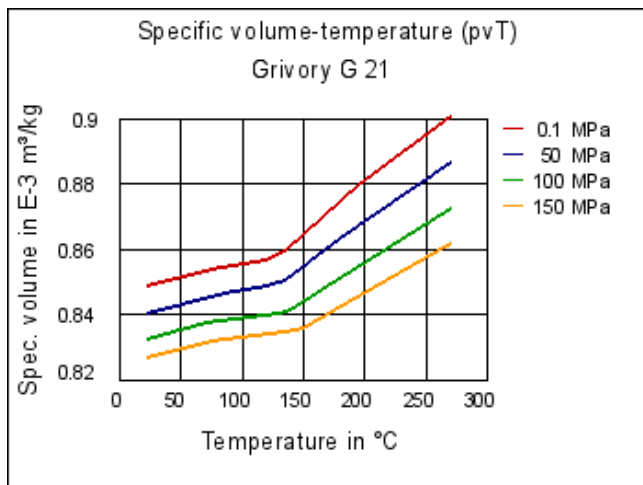
#### Creep curve °C



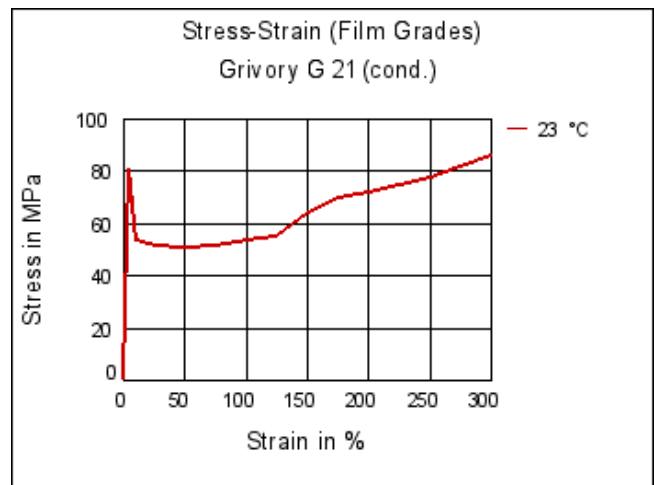
#### Creep modulus-time 23°C



#### Specific volume-temperature (pvT)



#### Stress-Strain (Film Grades)



#### Characteristics

##### Processing

Injection Molding, Extrusion - cast film, Extrusion - blow molding, Blown Film Extrusion, Other Extrusion

##### Delivery form

Granules

##### Special Characteristics

Transparent

##### Regional Availability

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

##### Product Attributes

Barrier Properties, Partially aromatic Polyamide

##### Packaging

Blow moulded containers, Injectionstretchblowmoulded containers, Non oriented film, Oriented film, Paper coating, Tubes, Cosmetics / Personal care

##### Food Contact

EU Requirements, FDA

##### Biocompatibility

USP VI

##### Potable Water Contact

NSF 61