

## Orgalloy<sup>®</sup> RS 6030 NAT

PA6-GF30...

### Orgalloy<sup>®</sup> RS 6030 NAT resin

**Orgalloy<sup>®</sup> RS 6030 NAT resin** is a fiberglass reinforced polyamide 6 alloy designed for injection molding. This natural grade offers an outstanding dimensional stability, chemical resistance to automotive fluids and is ideal for the realization of complex parts.

#### Main applications:

- Electric connectors.
- Sport parts.

#### Packaging:

This grade is delivered dried in sealed packaging (25kg bags) ready to be processed.

#### Shelf life:

Two years from the date of delivery. For any use above this limit, please refer to our technical services.

Rheological properties	dry / cond	Unit	Test Standard
Melt volume-flow rate, MVR	<b>2 / *</b>	cm <sup>3</sup> /10min	ISO 1133
Temperature	<b>235 / *</b>	°C	-
Load	<b>2.16 / *</b>	kg	-
Molding shrinkage, parallel	<b>0.2 / *</b>	%	ISO 294-4, 2577
Molding shrinkage, normal	<b>0.5 / *</b>	%	ISO 294-4, 2577

Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	<b>8900 / 8300</b>	MPa	ISO 527-1/-2
Stress at break	<b>140 / 130</b>	MPa	ISO 527-1/-2
Strain at break	<b>3 / 3</b>	%	ISO 527-1/-2
Tensile creep modulus, 1h	<b>* / 5750</b>	MPa	ISO 899-1
Tensile creep modulus, 1000h	<b>* / 4050</b>	MPa	ISO 899-1
Charpy impact strength, +23°C	<b>- / N</b>	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, +23°C	<b>16 / 17</b>	kJ/m <sup>2</sup>	ISO 179/1eA

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature, 10°C/min	<b>220 / *</b>	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.80 MPa	<b>190 / *</b>	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	<b>210 / *</b>	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	<b>185 / *</b>	°C	ISO 306
Coeff. of linear therm. expansion, parallel	<b>19 / *</b>	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	<b>126 / *</b>	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm nom. thickn.	<b>HB / *</b>	class	IEC 60695-11-10
Thickness tested	<b>1.6 / *</b>	mm	-
Yellow Card available	<b>yes / *</b>	-	-
Burning Behav. at thickness h	<b>HB / *</b>	class	IEC 60695-11-10

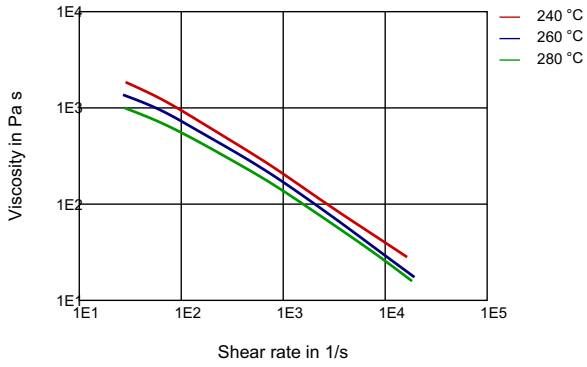
## Orgalloy® RS 6030 NAT

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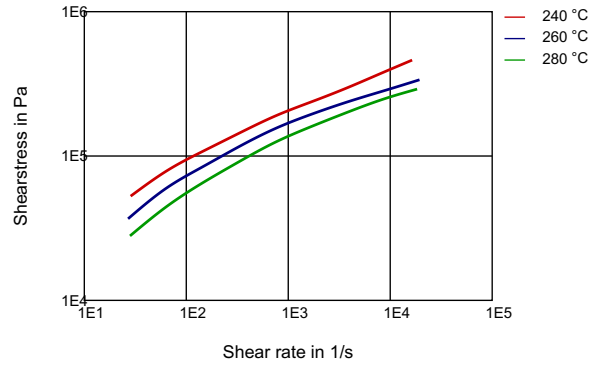
Thickness tested	<b>3.2 / *</b>	mm	-
Yellow Card available	<b>yes / *</b>	-	-
<b>Electrical properties</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
Relative permittivity, 100Hz	<b>- / 3</b>	-	IEC 60250
Relative permittivity, 1MHz	<b>- / 4</b>	-	IEC 60250
Dissipation factor, 100Hz	<b>- / 640</b>	E-4	IEC 60250
Dissipation factor, 1MHz	<b>- / 230</b>	E-4	IEC 60250
Volume resistivity	<b>- / &gt;1E13</b>	Ohm*m	IEC 60093
Surface resistivity	<b>* / &gt;1E15</b>	Ohm	IEC 60093
Electric strength	<b>34 / 34</b>	kV/mm	IEC 60243-1
Comparative tracking index	<b>* / 600</b>	-	IEC 60112
<b>Other properties</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
Water absorption	<b>2.3 / *</b>	%	Sim. to ISO 62
Humidity absorption	<b>1 / *</b>	%	Sim. to ISO 62
Density	<b>1250 / 1250</b>	kg/m <sup>3</sup>	ISO 1183
<b>Test specimen production</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
Injection Molding, melt temperature	<b>280</b>	°C	ISO 294
Injection Molding, mold temperature	<b>60</b>	°C	ISO 10724
<b>Mechanical properties (TPE)</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
Shore D hardness, 15s	<b>78 / *</b>	-	ISO 7619-1

**Diagrams**

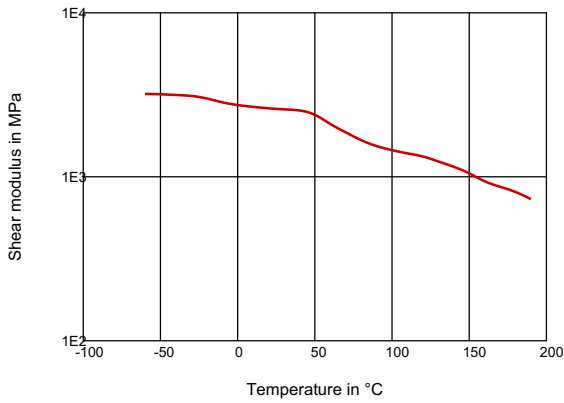
**Viscosity-shear rate**



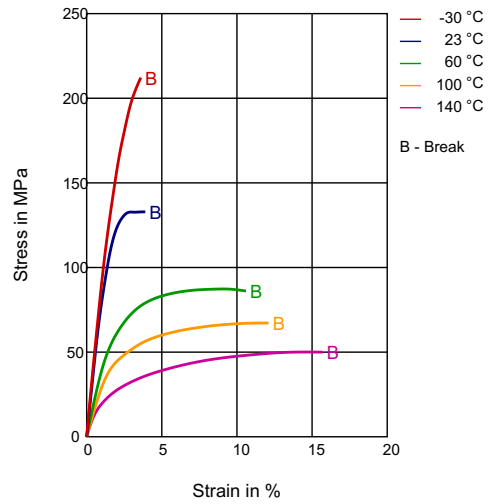
**Shearstress-shear rate**



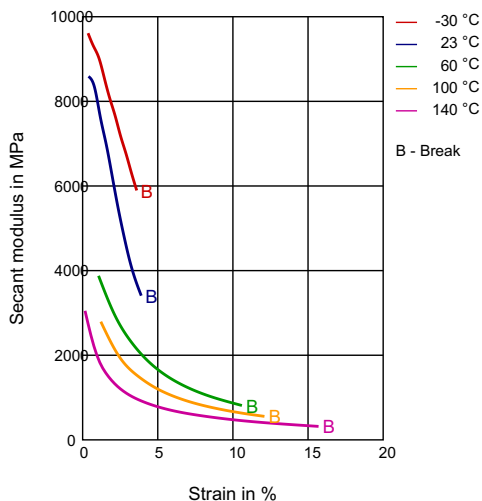
**Dynamic Shear modulus-temperature**



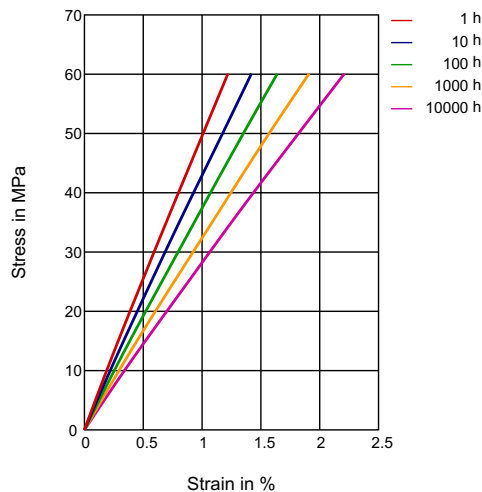
**Stress-strain**



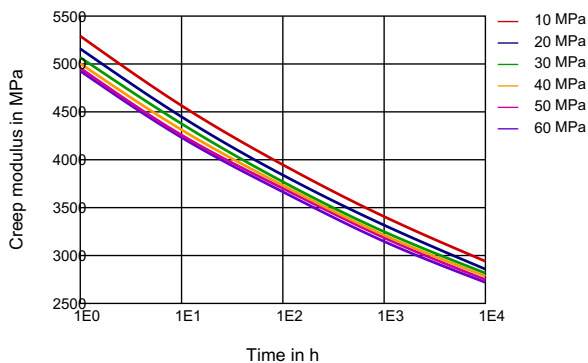
**Secant modulus-strain**



**Stress-strain (isochronous) 23°C**



**Creep modulus-time 23°C**



**Processing conditions:**

- Drying time (only necessary for bags opened for more than two hours): 4-8 hours at 80°C
- Injection temperature (min-recommended-max): 260-270-280°C
- Mould temperature (min-max): 60-80°C

**Characteristics**

**Processing**

Injection Molding

**Delivery form**

Pellets

**Special Characteristics**

Light stabilized or stable to light, U.V. stabilized or stable to weather, Heat stabilized or stable to heat

**Regional Availability**

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

**Chemical Media Resistance**

**Acids**

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## Orgalloy® RS 6030 NAT

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- ✓ Sulfuric Acid (5% by mass) (23°C)

### Bases

- ✓ Sodium Hydroxide solution (1% by mass) (23°C)

### Alcohols

- ✓ Methanol (23°C)
- ✓ Ethanol (23°C)

### Hydrocarbons

- ✓ Toluene (23°C)

### Ketones

- ✓ Acetone (23°C)

### Standard Fuels

- ✓ Standard fuel with alcohol (pref. ISO 1817 Liquid 4) (23°C)

### Salt solutions

- ✓ Zinc Chloride solution (50% by mass) (23°C)

### Other

- ✓ Ethylene Glycol (50% by mass) in water (108°C)