ORGALLOY® RS 6010 NAT

Orgalloy® RS 6010 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 CHARACTERISTICS

PROPERTIES	DRY / COND	UNIT	TEST STANDARD
RHEOLOGICAL PROPERTIES			
Melt Volume-Flow Rate	5 / *	cm^3/10min	ISO 1133
Temperature	235 / *	°C	-
Load	2.16 / *	kg	-
Molding Shrinkage, parallel	0.2 / *	%	ISO 294-4, 2577
Molding Shrinkage, normal	0.6 / *	%	ISO 294-4, 2577
MECHANICAL PROPERTIES			
Tensile Modulus	4150 / 3800	MPa	ISO 527-1/-2
Yield stress	80 / 73	MPa	ISO 527-1/-2
Yield strain	3 / 3	%	ISO 527-1/-2
Nominal Strain at Break	4 / 4	%	ISO 527-1/-2
Shore D Hardness, 15s	76 / *	-	ISO 7619-1
Tensile Creep Modulus, 1h	* / 2530	MPa	ISO 899-1
Tensile Creep Modulus, 1000h	* / 1790	MPa	ISO 899-1
Charpy Impact Strength, +23°C	- / No Break	kJ/m^2	ISO 179/1eU
Charpy Notched Impact Strength, +23°C	7 / 11	kJ/m^2	ISO 179/1eA
THERMAL PROPERTIES			
Melting Temperature, 10°C/min	220 / *	°C	ISO 11357-1/-3
Temp. of Deflection Under Load, 1.80 MPa	190 / *	°C	ISO 75-1/-2
Temp. of Deflection Under Load, 0.45 MPa	210 / *	°C	ISO 75-1/-2
Vicat Softening Temperature, 50°C/h 50N	170 / *	°C	ISO 306
Burning Behav. at 1.5 mm Nominal Thickness	HB / *	class	IEC 60695-11-10
Thickness Tested	1.6 / *	mm	-
Burning Behav. at Thickness h	HB / *	class	IEC 60695-11-10
Thickness Tested	3.2 / *	mm	-
ELECTRICAL PROPERTIES			
Relative Permittivity, 100Hz	- / 3	-	IEC 60250
Relative Permittivity, 1MHz	- / 3	-	IEC 60250
Dissipation Factor, 100Hz	- / 630	E-4	IEC 60250
Dissipation Factor, 1MHz	- / 240	E-4	IEC 60250
Volume Resistivity	- / >1E13	Ohm*m	IEC 60093

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Surface Resistivity	* / >1E15	Ohm	IEC 60093
Dielectric (Electric) Strength	36 / 36	kV/mm	IEC 60243-1
Comparative Tracking Index	* / 600	-	IEC 60112
OTHER PROPERTIES			
Water Absorption	3 / *	%	Sim. to ISO 62
Humidity Absorption	1.2 / *	%	Sim. to ISO 62
Density	1120 / 1120	kg/m³	ISO 1183

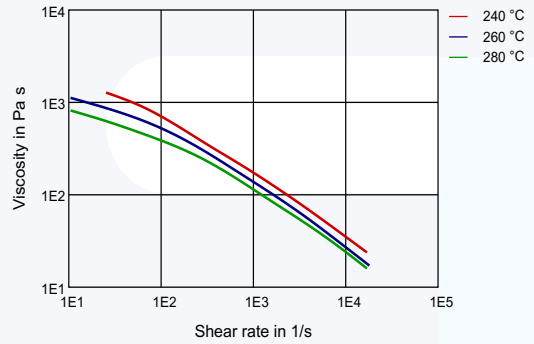
MAIN APPLICATIONS:
- Electric connectors
- Sport parts

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

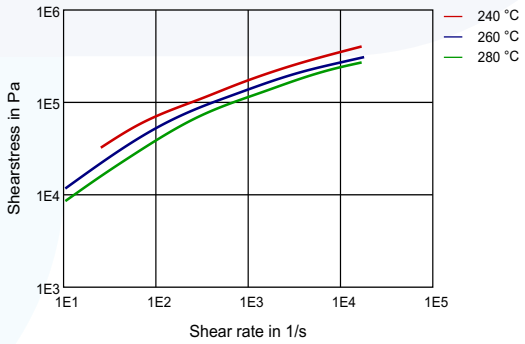
SHELF LIFE:
Two years from the date of delivery. For any use above this limit, please refer to our technical services.

DIAGRAMS

VISCOSITY-SHEAR RATE



SHEARSTRESS-SHEAR RATE



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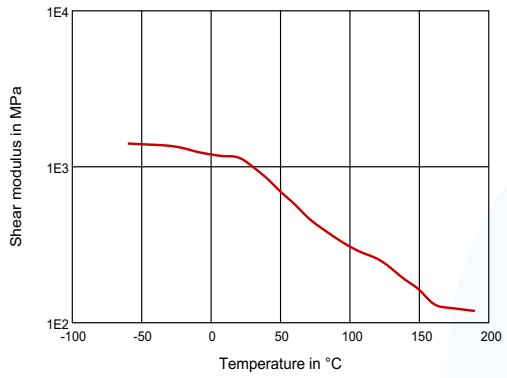
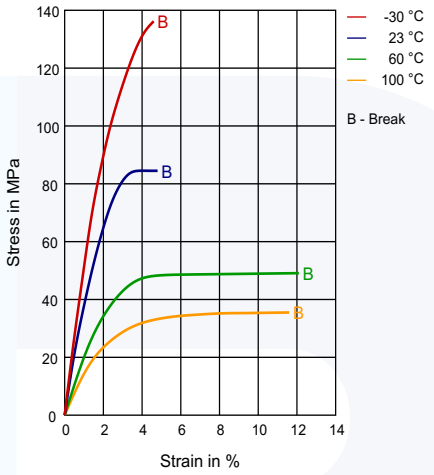
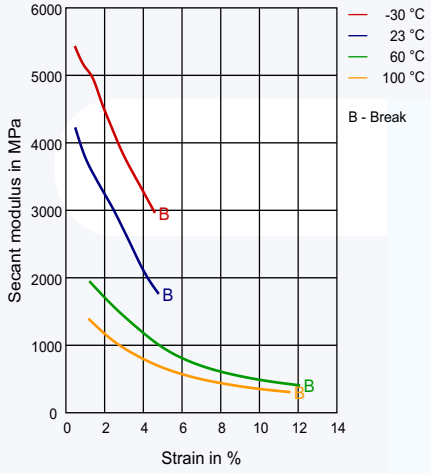
DYNAMIC SHEAR MODULUS-TEMPERATURE



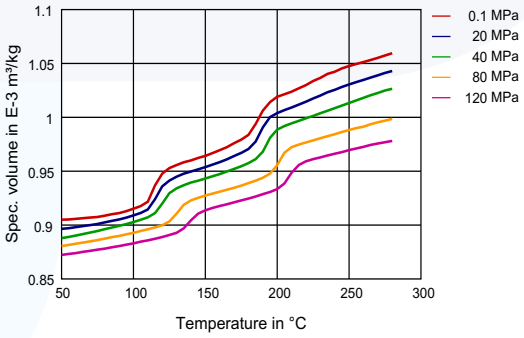
STRESS-STRAIN



SECANT MODULUS-STRAIN



SPECIFIC VOLUME-TEMPERATURE (PVT)



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

PROCESSING

Injection Molding

SPECIAL CHARACTERISTICS

Heat Stabilized, Light Stabilized

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DELIVERY FORM

Pellets

REGIONAL AVAILABILITY

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

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