

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.

PROPERTIES	DRY / COND	UNIT	TEST STANDARD
RHEOLOGICAL PROPERTIES			
Melt Volume-Flow Rate	5 / *	cm³/10min	ISO 1133
Temperature	235 / *	°C	-
	455 / *	°F	
Load	2.16 / *	kg	-
	4.76 / *	lb	
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
	602000 / 551000	psi	
Yield stress	80 / 73	MPa	ISO 527-1/-2
	11600 / 10600	psi	
Yield strain	3 / 3	%	ISO 527-1/-2
Nominal Strain at Break	4 / 4	%	ISO 527-1/-2
Shore D Hardness	76 / *	-	ISO 868
Tensile Creep Modulus, 1h	* / 2530	MPa	ISO 899-1
	* /	psi	
Tensile Creep Modulus, 1000h	367000 * / 1790	MPa	ISO 899-1
	* /	psi	
Charpy Impact Strength, +23°C	260000 -7 No Break	kJ/m²	ISO 179/1eU
Charpy Notched Impact Strength, +23°C	7 / 11	kJ/m²	ISO 179/1eA
	3.33 / 5.23	ftlb/in²	
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
	374 / *	°F	
Temp. of Deflection Under Load, 0.45 MPa	210 / *	°C	ISO 75-1/-2
	410 / *	°F	

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Vicat Softening Temperature, 50°C/h 50N	170 / *	°C	ISO 306
	338 / *	°F	
Burning Behav. at 1.5 mm Nominal Thickness	HB / *	class	IEC 60695-11-10
Thickness Tested	1.6 / *	mm	-
	0.0630 / *	in	
Burning Behav. at Thickness h	HB / *	class	IEC 60695-11-10
Thickness Tested	3.2 / *	mm	-
	0.1260 / *	in	
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
Surface Resistivity	* / >1E15	Ohm	IEC 60093
Dielectric (Electric) Strength	36 / 36	kV/mm	IEC 60243-1
	914 / 914	kV/in	
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
	1.12 / 1.12	g/cm³	

MAIN APPLICATIONS: • Electric connectors • Sport parts

PACKAGING:

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

SHELF LIFE:

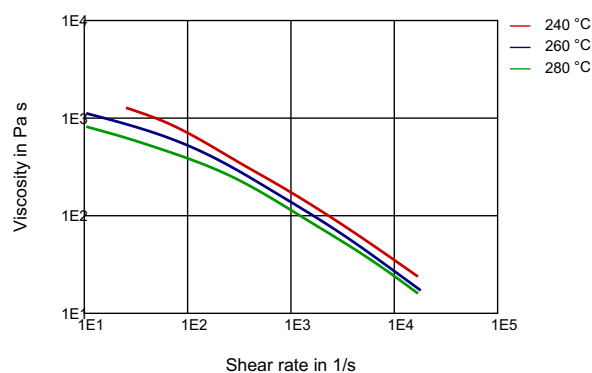
Two years from the date of delivery. For any use above this limit, please refer to our technical services.

ORGALLOY[®]

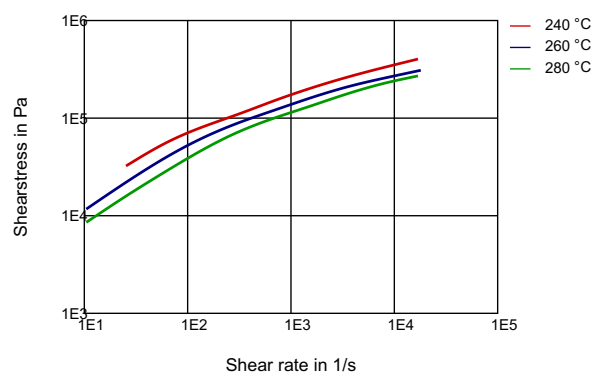
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DIAGRAMS

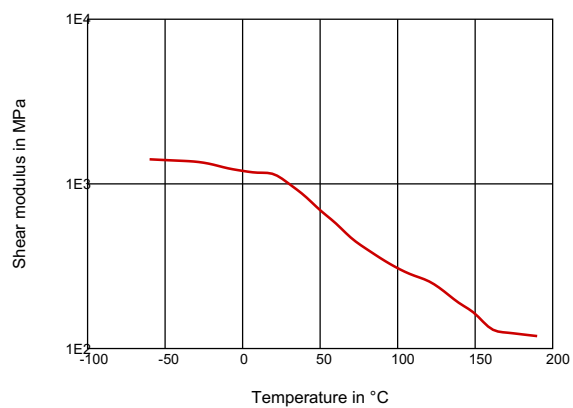
VISCOSITY-SHEAR RATE



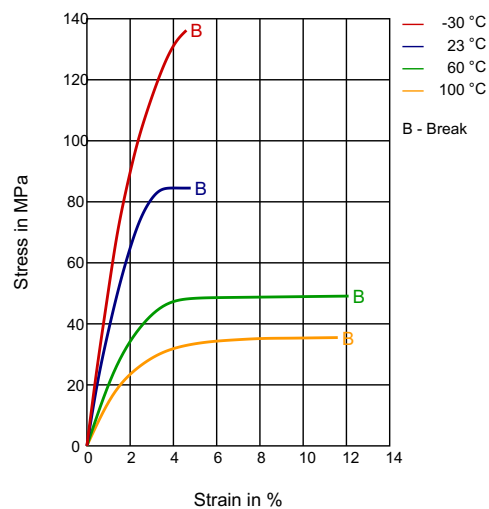
SHEARSTRESS-SHEAR RATE



DYNAMIC SHEAR MODULUS-TEMPERATURE

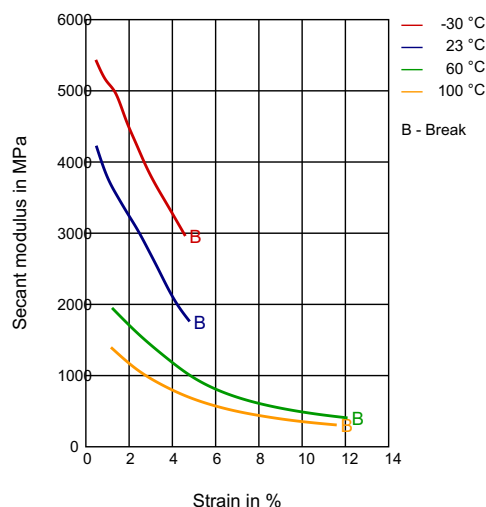


STRESS-STRAIN

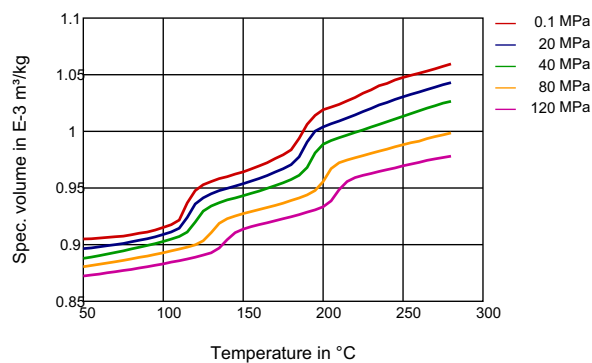


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SECANT MODULUS-STRAIN



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

DELIVERY FORM

Pellets

SPECIAL CHARACTERISTICS

Heat Stabilized, Light Stabilized

REGIONAL AVAILABILITY

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