ORGALLOY®
LT 5050 T6L NAT

Orgalloy® LT 5050 T6L NAT resin is a polyamide alloy especially designed for tube extrusion. This natural grade dedicated to extrusion offers good barrier properties and chemical resistance to oils and HFC gas, a high thermal resistance and flexibility.

PROPERTIES	DRY / COND	UNIT	TEST STANDARD
RHEOLOGICAL PROPERTIES			
Melt Volume-Flow Rate	1.8 / *	cm³/10 min	ISO 1133
Temperature	235 / *	°C	-
	455 / *	°F	
Load	5 / *	kg	-
	11 / *	lb	
MECHANICAL PROPERTIES			
Tensile Modulus	- / 470	MPa	ISO 527-1/-2
	- / 68200	psi	
Yield Stress	- / 18	MPa	ISO 527-1/-2
	- / 2610	psi	
Yield Strain	- / 31	%	ISO 527-1/-2
Stress at Break	- / 34	MPa	ISO 527-1/-2
	- / 4930	psi	
Strain at Break	- / >50	%	ISO 527-1/-2
Shore D Hardness, after 15 s	55 / *	-	ISO 868
Tensile Creep Modulus, 1h	* / 420	MPa	ISO 899-1
	* / 60900	psi	
Tensile Creep Modulus, 1000h	* / 270	MPa	ISO 899-1
	* / 39200	psi	
Charpy Impact Strength, +23°C	No Break / No Break	kJ/m²	ISO 179/1eU
Charpy Impact Strength, -30°C	No Break / No Break	kJ/m²	ISO 179/1eU
Charpy Notched Impact Strength, +23°C	76 / 82	kJ/m²	ISO 179/1eA
	36.2 / 39	ftlb/in²	
Charpy Notched Impact Strength, -30°C	28 / 30	kJ/m²	ISO 179/1eA
	13.3 / 14.3	ftlb/in²	
THERMAL PROPERTIES			
Melting Temperature, 10°C/min	220 / *	°C	ISO 11357-1/-3
Vicat Softening Temperature, 50°C/h 50N	75 / *	°C	ISO 306
	167 / *	°F	
Coeff. of Linear Thermal Expansion, parallel	170 / *	E-6/K	ISO 11359-1/-2

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Coeff. of Linear Thermal Expansion, normal	180 / *	E-6/K	ISO 11359-1/-2
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	- / 4	-	IEC 60250
Relative Permittivity, 1MHz	- / 4	-	IEC 60250
Dissipation Factor, 100Hz	- / 1100	E-4	IEC 60250
Dissipation Factor, 1MHz	- / 500	E-4	IEC 60250
Volume Resistivity	- / 7.4E11	Ohm* m	IEC 62631-3-1
Surface Resistivity	* / >1E15	Ohm	IEC 62631-3-2
Dielectric (Electric) Strength	36 / 36	kV/mm	IEC 60243-1
	914 / 914	kV/in	
Comparative Tracking Index	* / 600	-	IEC 60112
OTHER PROPERTIES			
Water Absorption, 23°C, immersion, equilibrium	5.6 / *	%	ISO 62
Humidity Absorption, 23°C, RH50%, equilibrium	2 / *	%	ISO 62
Density	1040 / 1040	kg/m³	ISO 1183
	1.04 / 1.04	g/cm³	

MAIN APPLICATIONS:

- Barrier layer for air conditionning hoses
- Barrier layer for LPG lines

PACKAGING:

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

SHELF LIFE:

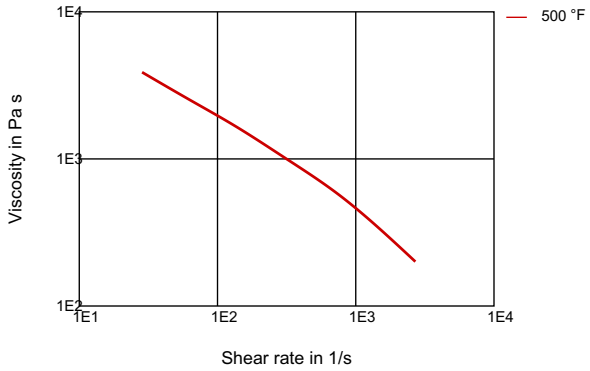
Two years from the date of delivery. For any use above this limit, please refer to our technical services.

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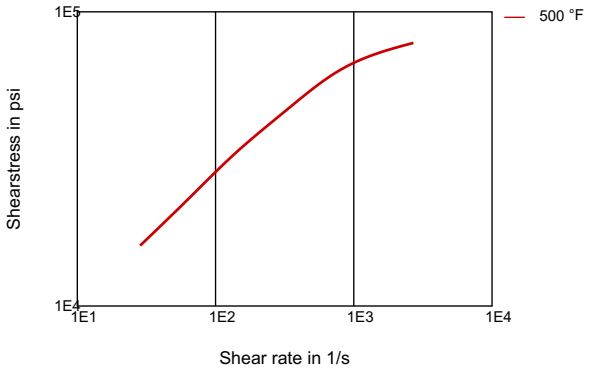
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DIAGRAMS

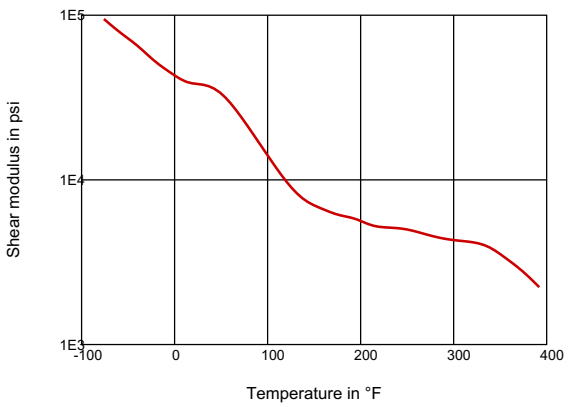
VISCOSITY-SHEAR RATE



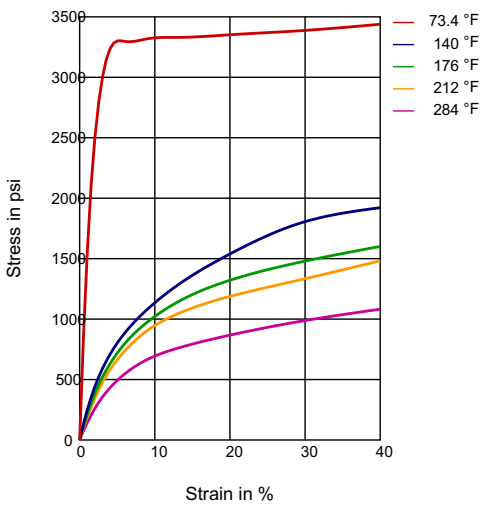
SHEARSTRESS-SHEAR RATE



DYN. SHEAR MODULUS-TEMPERATURE



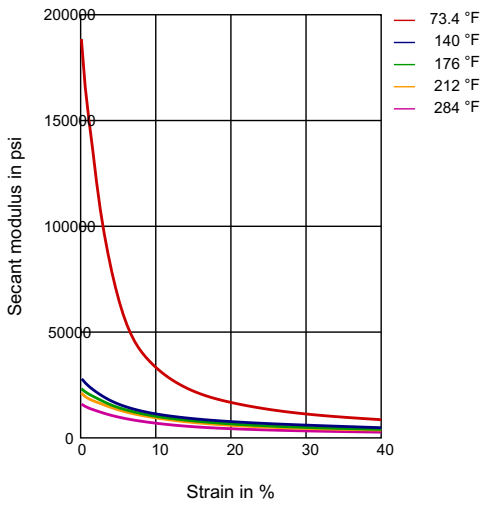
STRESS-STRAIN



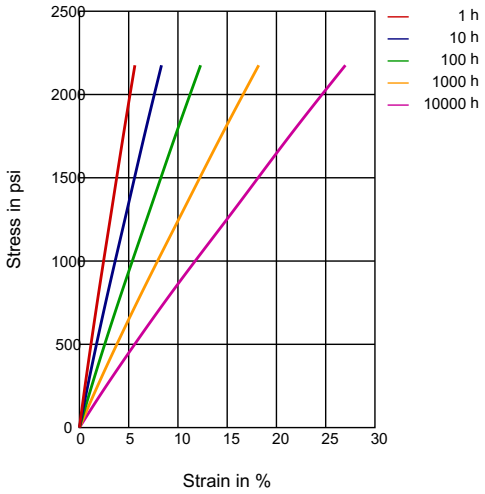
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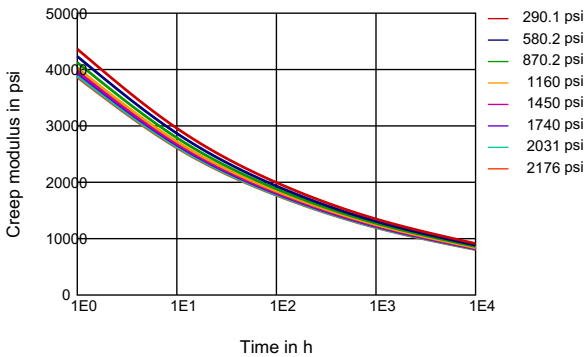
SECANT MODULUS-STRAIN



STRESS-STRAIN (ISOCHRONOUS) 73°F



CREEP MODULUS-TIME 73°F



Processing conditions:

- Drying time (only necessary for bags opened for more than two hours): 4-8 hours at 80°C
- Extrusion melt temperature (min-recommended-max): 250-260-270°C

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PROCESSING

Film Extrusion, Profile Extrusion, Sheet Extrusion, Other Extrusion, Calandering, Transfer Molding, Thermoforming

DELIVERY FORM

Pellets

SPECIAL CHARACTERISTICS

Heat Stabilized, Light Stabilized

REGIONAL AVAILABILITY

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

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