

Orgalloy® RS 6000

Polyamide 6 Alloy

Arkema

Message:

Orgalloy® RS 6000 is a Polyamide 6 Alloy (Nylon 6 Alloy) product. It can be processed by blow molding, calendering, casting, coating, extrusion, film extrusion, injection molding, profile extrusion, resin transfer molding, sheet extrusion, or thermoforming and is available in Africa & Middle East, Asia Pacific, Europe, Latin America, or North America. Primary characteristic: heat resistant.

General Information				
Features	High Heat Resistance			
	Platable			
Forms	Pellets			
Processing Method	Blow Molding			
	Calendering			
	Casting			
	Coating			
	Extrusion			
	Film Extrusion			
	Injection Molding			
	Profile Extrusion			
	Resin Transfer Molding			
	Sheet Extrusion			
	Thermoforming			
Multi-Point Data	Isothermal Stress vs. Strain (ISO 11403-1)			
	Secant Modulus vs. Strain (ISO 11403-1)			
	Shear Modulus vs. Temperature (ISO 11403-1)			
	Specific Volume vs Temperature (ISO 11403-2)			
	Viscosity vs. Shear Rate (ISO 11403-2)			
Physical	Dry	Conditioned	Unit	Test Method
Density	1030	1030	kg/m ³	ISO 1183 ¹
Melt volume-flow rate (235°C/2.16 kg)	8.00	--	cm ³ /10min	ISO 1133 ²
Water Absorption				ISO 62 ³
Saturation	3.3	--	%	
Equilibrium	1.3	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile modulus	--	2300	MPa	ISO 527-2 ⁴
Tensile Stress (Yield)	--	50.0	MPa	ISO 527-2 ⁵

Tensile Strain (Yield)	--	4.0	%	ISO 527-2 ⁶
Nominal strain at break	--	> 50	%	ISO 527-2 ⁷
Tensile Creep Modulus				ISO 899-1 ⁸
1 hr	--	2030	MPa	
1000 hr	--	870	MPa	
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				ISO 75-2 ⁹
0.45 MPa	130	--	°C	
1.8 MPa	75.0	--	°C	
Vicat Softening Temperature (50°C/h, B (50N))	129	--	°C	ISO 306 ¹⁰
Melting Temperature ¹¹	220	--	°C	ISO 11357-3 ¹²
CLTE				ISO 11359-2 ¹³
Flow	9.3E-5	--	cm/cm/°C	
Transverse	1.3E-4	--	cm/cm/°C	
Electrical	Dry	Conditioned	Unit	Test Method
Surface resistivity	--	> 1.0E+15	ohms	IEC 60093 ¹⁴
Volume resistivity	--	> 1.0E+13	ohms·m	IEC 60093 ¹⁵
Electric strength	38	38	kV/mm	IEC 60243-1 ¹⁶
Relative Permittivity				IEC 60250 ¹⁷
100 Hz	--	3.00		
1 MHz	--	3.00		
Dissipation Factor				IEC 60250 ¹⁸
100 Hz	--	0.062		
1 MHz	--	0.025		
Comparative tracking index	--	600		IEC 60112 ¹⁹
Flammability	Dry	Conditioned	Unit	Test Method
Burning Behav. at 1.6mm nom. thickn. (1.60 mm, UL)	HB	--		ISO 1210 ²⁰
Burning Behav. at thickness h (3.20 mm, UL)	HB	--		ISO 1210 ²¹
NOTE				

1.

Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.

2.

Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.

3.

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4.

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5.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
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8.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
9.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
10.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
11.	10 °C/min
12.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
13.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
14.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
15.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
16.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
17.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
18.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
19.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
20.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
21.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.

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