Orgalloy® RS 6000 NAT

PA6... ARKEMA

Product Texts

Orgalloy® RS 6000 NAT resin is a 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:

- Automotive tube clamping
- Ablation plate for miniature circuit breaker
- 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.

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
[C] Melt volume-flow rate, MVR	**8 / ***	cm³/10min	ISO 1133
Temperature	**235 / ***	°C	-
Load	**2.16 / ***	kg	-

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**2280 / 2030**	MPa	ISO 527
[C] Yield stress	**55 / 47**	MPa	ISO 527
[C] Yield strain	**4 / 6**	%	ISO 527
[C] Nominal strain at break	**>50 / >50**	%	ISO 527
[C] Tensile creep modulus, 1h	*** / 2030**	MPa	ISO 899-1
[C] Tensile creep modulus, 1000h	*** / 870**	MPa	ISO 899-1
[C] Charpy impact strength, +23°C	**61 / 67**	kJ/m²	ISO 179/1eU
[C] Charpy impact strength, -30°C	**59 / 59**	kJ/m²	ISO 179/1eU
[C] Charpy notched impact strength, +23°C	**7 / 8**	kJ/m²	ISO 179/1eA
[C] Charpy notched impact strength, -30°C	**5 / 5**	kJ/m²	ISO 179/1eA
[C] Shore D hardness	**73 / ***	-	ISO 7619-1

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Melting temperature, 10°C/min	**220 / ***	°C	ISO 11357-1/-3
[C] Temp. of deflection under load, 1.80 MPa	**71 / ***	°C	ISO 75-1/-2
[C] Temp. of deflection under load, 0.45 MPa	**130 / ***	°C	ISO 75-1/-2
[C] Vicat softening temperature, B	**150 / ***	°C	ISO 306
[C] Coeff. of linear therm. expansion, parallel	**93 / ***	E-6/K	ISO 11359-1/-2
[C] Coeff. of linear therm. expansion, normal	**133 / ***	E-6/K	ISO 11359-1/-2
[C] Burning Behav. at 1.5 mm nom. thickn.	**HB / ***	class	IEC 60695-11-10
Thickness tested	**1.6 / ***	mm	-
[C] Burning Behav. at thickness h	**HB / ***	class	IEC 60695-11-10
Thickness tested	**3.2 / ***	mm	-

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Relative permittivity, 100Hz	**- / 3**	-	IEC 62631-2-1
[C] Relative permittivity, 1MHz	**- / 3**	-	IEC 62631-2-1
[C] Dissipation factor, 100Hz	**- / 620**	E-4	IEC 62631-2-1
[C] Dissipation factor, 1MHz	**- / 250**	E-4	IEC 62631-2-1

[C] Volume resistivity	**- / >1E13**	Ohm*m	IEC 62631-3-1
[C] Surface resistivity	*** / >1E15**	Ohm	IEC 62631-3-2
[C] Electric strength	**38 / 38**	kV/mm	IEC 60243-1
[C] Comparative tracking index	*** / 600**	-	IEC 60112

[C]: CAMPUS

Other properties	**dry / cond**	**Unit**	**Test Standard**
[C] Water absorption	**6.6 / ***	%	Sim. to ISO 62
[C] Humidity absorption	**2.2 / ***	%	Sim. to ISO 62
[C] Density	**1030 / 1030**	kg/m³	ISO 1183

[C]: CAMPUS

Processing Recommendation Injection Molding	**Value**	**Unit**	**Test Standard**
Pre-drying - Temperature	**80**	°C	-
Pre-drying - Time	**4 - 8**	h	-
Melt temperature	**260 - 280**	°C	-
Mold temperature	**20 - 60**	°C	-

Characteristics

Processing
Injection Molding

Delivery form
Pellets, Natural Color

Special Characteristics
Light stabilized or stable to light, Heat stabilized or stable to heat

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

Other text information

Injection molding

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): 20-60°C