

TECHNICAL DATA SHEET

ORGALLOY® RS 6000 NAT

POLYAMIDE ALLOY PELLET

ORGALLOY® RS 6000 NAT is a polyamide alloy. This natural grade is designed for injection molding and offers an outstanding dimensional stability, chemical resistance to automotive fluids and is ideal for the realization of complex parts.

TYPE

PA*

MAIN APPLICATIONS

- Electronics Chemicals - Solar Panels
- Accessories
- Industry - Distribution
- Auto - Others Injection

DELIVERY FORM

- Pellets

TRANSFORMATION PROCESSES

- Injection Molding

ADDITIVES

- Heat Stabilized
- Light Stabilized

RHEOLOGICAL PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Melt volume flow rate (MVR), 235°C / 2.16 kg (455°F / 4.4 lb)	8	cm³/10min	ISO 1133
Shrinkage, Parallel (t+24h)	1.0	%	ISO 294-4
Shrinkage, Normal (t+24h)	1.3	%	ISO 294-4

MECHANICAL PROPERTIES

PROPERTIES	DRY / COND VALUE*	UNIT	TEST STANDARD
Hardness, Shore D, 15 s	- / 73		ISO 868
Charpy unnotched impact strength, 23°C (73°F)	61 / 67	kJ/m²	ISO 179 1eU
Charpy unnotched impact strength, -30°C (-22°F)	59 / 59	kJ/m²	ISO 179 1eU
Charpy notched impact strength, 23°C (73°F)	7 / 8	kJ/m²	ISO 179 1eA
Charpy notched impact strength, -30°C (-22°F)	5 / 5	kJ/m²	ISO 179 1eA
Nominal strain at break, 23°C (73°F), 50 mm/min	14 / 21	%	ISO 527-1/-2
Yield strain, 23°C (73°F), 50 mm/min	4 / 6	%	ISO 527-1/-2
Yield stress, 23°C (73°F), 50 mm/min	55 / 47	MPa	ISO 527-1/-2
Tensile modulus, 23°C (73°F), 1 mm/min	2280 / 2030	MPa	ISO 527-1/-2
Flexural modulus, 23°C (73°F)	- / 1650	MPa	ISO 178

*DRY: Dry As Molded (DAM) if pellet / Dry if powder.
COND: Conditioned.

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THERMAL PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Vicat softening temperature, 50N at 50°C/h	150	°C	ISO 306
Heat deflection temperature, 0.45 MPa	130	°C	ISO 75-1/-2
Heat deflection temperature, 1.8 MPa	71	°C	ISO 75-1/-2
Melting temperature, 10°C/min	220	°C	ISO 11357-1/-3

ELECTRICAL PROPERTIES

PROPERTIES	DRY / COND VALUE*	UNIT	TEST STANDARD
Surface resistivity, 23°C (73°F)	- / >1E15	Ohm/sq	IEC 62631-3-2
Volumic (transversal) resistivity, 23°C (73°F)	- / >1E13	Ohm.m	IEC 62631-3-1
Comparative tracking index, 23°C (73°F)	- / 600		IEC 60112
Dielectric stress, 23°C (73°F)	- / 38	kV/mm	IEC 60243-1
Relative permittivity, 100Hz	- / 3		IEC 62631-2-1
Relative permittivity, 1Mhz	- / 3		IEC 62631-2-1
Dissipation factor, 100Hz	- / 620	E-4	IEC 62631-2-1
Dissipation factor, 1Mhz	- / 620	E-4	IEC 62631-2-1

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OTHER PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Moisture absorption, At equilibrium at 23°C (73°F) / 50%HR	2.2	%	ISO 62
Water absorption, 23°C (73°F), immersion, equilibrium	6.6	%	ISO 62
Specific gravity, 23°C (73°F)	1.03	g/cm ³	ISO 1183-1

PACKAGING

Available packaging:

- 25 kg / 55 lb bags

SHELF LIFE

Two years from the date of delivery, when stored properly (sealed bags, appropriate moisture, UV protection and temperature). For any use above this limit, please refer to our technical services.

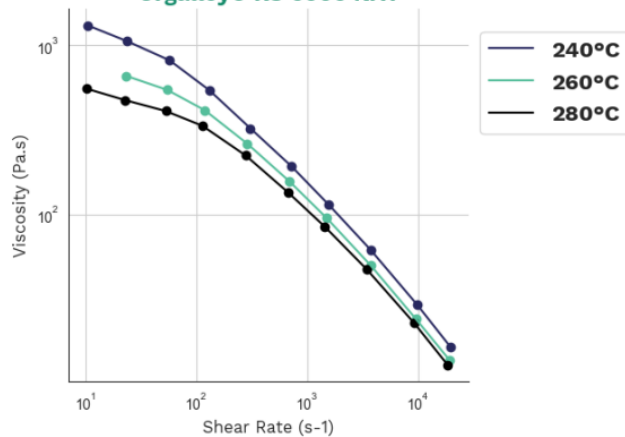
PROCESSING CONDITIONS:

- Typical melt temperature (Min / Recommended / Max) - Injection Molding: 250°C / 270°C / 290°C (480°F / 520°F / 555°F)
- Typical mold temperature - Injection molding: 20-60°C (70-140°F)
- Drying time and temperature: 80-90°C (175-195°F) / 4-6 hours

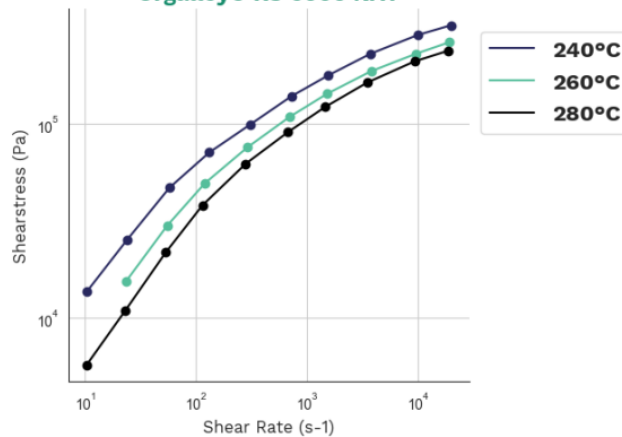
ORGALLOY® RS 6000 NAT

DIAGRAMS

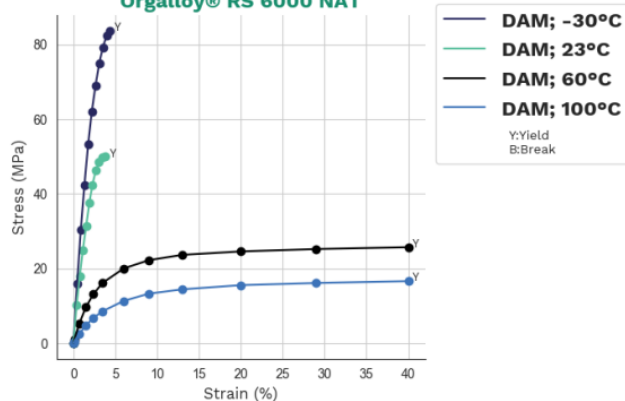
Viscosity-shear rate
Orgalloy® RS 6000 NAT



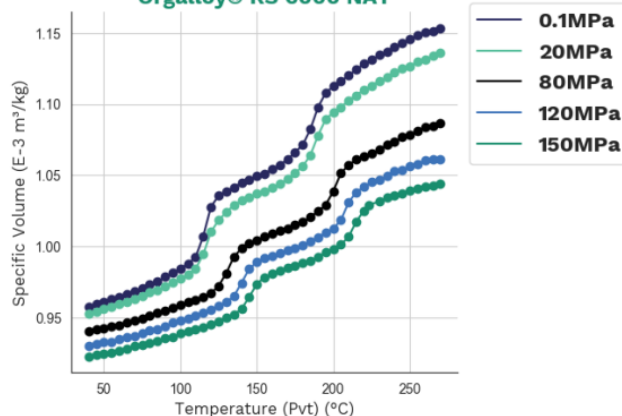
Shearstress-shear rate
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Stress-strain
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Specific volume-temperature (pvT)
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