

TECHNICAL DATA SHEET

ORGALLOY® LE 6000 NAT

POLYAMIDE ALLOY PELLET

ORGALLOY® LE 6000 NAT is a polyamide alloy. This natural grade designed for designed for cable sheathing & blown film extrusion and offers excellent barrier properties and chemical resistance to hydrocarbons, alcohols and solvents.

DESIGNATION

PA*

MAIN APPLICATIONS

- Performance Wire
- Cable
- Molding
- Film
- Industry - Distribution
- Auto Enging Cooling
- Auto - Others Injection
- Others - Filtration

DELIVERY FORM

- Pellets

TRANSFORMATION PROCESSES

- Extrusion - General
- Sheet Extrusion
- Tube Extrusion

ADDITIVES

- Heat Stabilized
- Light Stabilized

RHEOLOGICAL PROPERTIES

| PROPERTIES | VALUE | TEST STANDARD |
|---|----------------------------|---------------|
| Melt volume flow rate (MVR), 235°C / 2.16 kg (455°F / 4.4 lb) | 2.5 cm ³ /10min | ISO 1133 |

MECHANICAL PROPERTIES

| PROPERTIES | DRY / COND VALUE* | TEST STANDARD |
|---|---------------------------|---------------|
| Hardness, Shore D, 15 s | 66 / - | ISO 868 |
| Charpy unnotched impact strength, 23°C (73°F) | No Break / No Break | ISO 179 1eU |
| Charpy unnotched impact strength, -30°C (-22°F) | No Break / No Break | ISO 179 1eU |
| Charpy notched impact strength, 23°C (73°F) | 29 / 35 kJ/m ² | ISO 179 1eA |
| Charpy notched impact strength, -30°C (-22°F) | 11 / 11 kJ/m ² | ISO 179 1eA |
| Nominal strain at break, 23°C (73°F), 50 mm/min | > 50 / > 50 % | ISO 527-1/-2 |
| Yield strain, 23°C (73°F), 50 mm/min | 4 / 7 % | ISO 527-1/-2 |
| Yield stress, 23°C (73°F), 50 mm/min | 44 / 36 MPa | ISO 527-1/-2 |
| Tensile modulus, 23°C (73°F), 1 mm/min | 1815 / 1400 MPa | ISO 527-1/-2 |
| Flexural modulus, 23°C (73°F) | - / 800 MPa | ISO 178 |

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

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THERMAL PROPERTIES

| PROPERTIES | VALUE | TEST STANDARD |
|--|--------|----------------|
| Vicat softening temperature, 50N at 50°C/h | 118 °C | ISO 306 |
| Heat deflection temperature, 0.45 MPa | 84 °C | ISO 75-1/-2 |
| Heat deflection temperature, 1.8 MPa | 50 °C | ISO 75-1/-2 |
| Melting temperature, 10°C/min | 220 °C | ISO 11357-1/-3 |

ELECTRICAL PROPERTIES

| PROPERTIES | DRY / COND VALUE* | TEST STANDARD |
|---|-------------------|---------------|
| Comparative tracking index, 23°C (73,4°F) | - / 600 | IEC 60112 |

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

OTHER PROPERTIES

| PROPERTIES | VALUE | TEST STANDARD |
|--|------------------------|---------------|
| Moisture absorption, At equilibrium at 23°C (73°F) / 50%HR | 2.5 % | ISO 62 |
| Water absorption, 23°C (73°F), immersion, equilibrium | 7 % | ISO 62 |
| Specific gravity, 23°C (73°F) | 1.04 g/cm ³ | ISO 1183-1 |

PACKAGING

This grade is delivered dried in sealed packaging ready to be processed. 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.

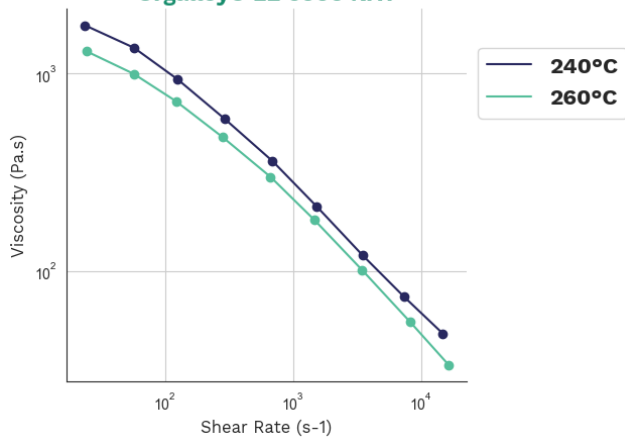
PROCESSING CONDITIONS:

- 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

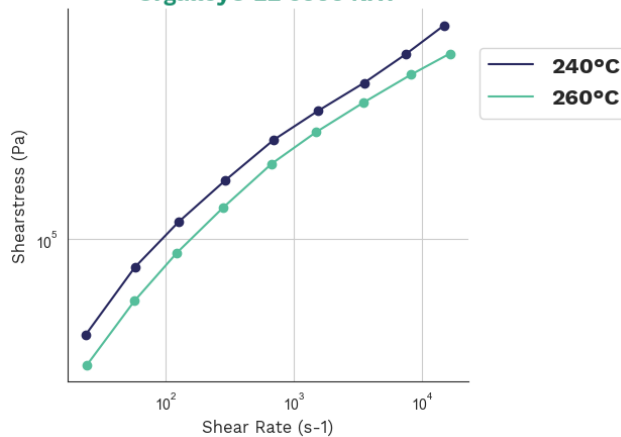
ORGALLOY® LE 6000 NAT

DIAGRAMS

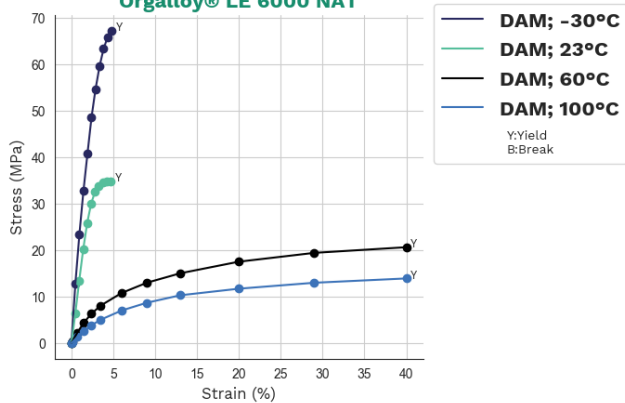
**Viscosity-shear rate
Orgalloy® LE 6000 NAT**



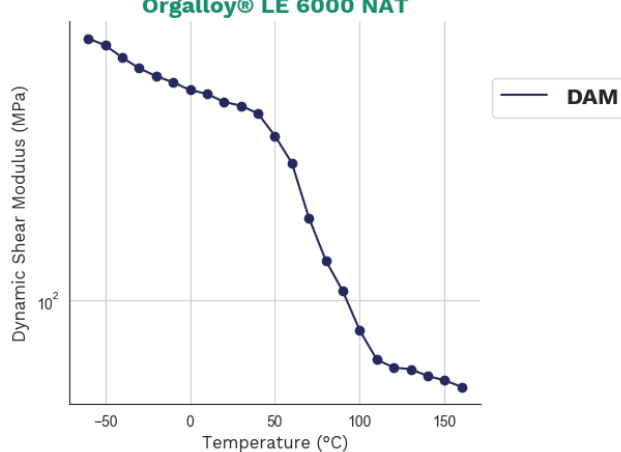
**Shearstress-shear rate
Orgalloy® LE 6000 NAT**



**Stress-strain
Orgalloy® LE 6000 NAT**



**Dynamic Shear modulus-temperature
Orgalloy® LE 6000 NAT**



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