# TECHNYL®

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**TECHNICAL DATA SHEET**

# TECHNYL D 247F NC

Polyamide 66 & 610, impact modified, alkali resistance, mold release, for injection molding

TECHNYL D 247F NC is an unfilled grade based on polyamide blend of polyamide 6.10 and polyamide 66, heatstabilized, impact modified, for injection moulding. This grade has been designed to offer high impact strength, alkaliresistance and excellent productivity. It is a partially bio-sourced materia

## General

| Feature | Impact modified Excellent processability | Molding release agent |
|---|---|---|
| Polymer type | (PA610 + PA66) blend | |
| Processing technology | Injection molding | |
| Certification | RoHS | EC 1907/2006 (REACH) |
| Applications | Industrial Applications | |
| Colors available | Natural | |
| Forms | Pellets | |

## Product identification

| ISO 1043 abbreviation | PA66+PA610 |
|---|---|
| ISO 16396 designation | PA66+PA610,0,M1,S14-020 |

## Physical properties

| | Condition | Standard | Unit | Value |
|---|---|---|---|---|
| Density | | ISO 1183 | g/cm³ | 1.07 |
| Humidity absorption | T=23°C, 50% RH | ISO 62 | % | 1.4 |
| Water absorption | 24 hr, 23°C | ISO 62 | % | 0.6 - 0.7 |
| Molding shrinkage, parallel | | ISO 294-4, 2577 | % | 1.3 - 1.5 |
| Molding shrinkage, normal | | ISO 294-4, 2577 | % | 0.9 - 1.1 |

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## Mechanical properties

| | Condition | Standard | Unit | Value dam / cond.* |
|---|---|---|---|---|
| Tensile modulus | 1 mm/min | ISO 527-1/-2 | MPa | 2400 / 1300 |
| Strain at break | | ISO 527-1/-2 | % | 35 / - |
| Yield stress | | ISO 527-1/-2 | MPa | 60 / - |
| Flexural modulus, ISO 178 | 2 mm/min | ISO 178 | MPa | 2150 / 1300 |
| Flexural strength, ISO 178 | 2 mm/min | ISO 178 | MPa | 80 / 45 |
| Charpy notched impact strength, +23°C | +23°C | ISO 179/1eA | kJ/m² | 11 / 20 |
| Charpy notched impact strength, -30°C | -30°C | ISO 179/1eA | kJ/m² | 11 / - |
| Izod notched impact strength, +23°C | +23°C | ISO 180/1A | kJ/m² | 21 / - |
| Rockwell hardness | | ISO 2039/2 | ScaleR | 111 / - |

## Thermal properties

| | Condition | Standard | Unit | Value |
|---|---|---|---|---|
| Melting temperature, 10°C/min | | ISO 11357-1 | °C | 262 |
| Temp. of deflection under load, 0.45 MPa | 0.45 MPa | ISO 75 | °C | 140 |
| Temp. of deflection under load, 1.80 MPa | 1.80 MPa | ISO 75 | °C | 60 |

## Burning behaviour

| | Condition | Standard | Unit | Value |
|---|---|---|---|---|
| Flammability, 3.0 mm | 3.0 mm | UL 94 | | HB |

*: conditioned according to ISO 1110

## Processing conditions

| | |
|---|---|
| Drying temperature/time | 80°C |
| Suggested max moisture | 0.2 % |
| Rear temperature | 260 - 270 °C |
| Middle temperature | 265 - 275 °C |
| Front temperature | 270 - 280 °C |
| Recommended mould temperature | 60 - 80 °C |

## Injection notes

The material is supplied in airtight bags, ready for use. In case that the virgin material has absorbed moisture, it must be dried with a dehumidified air drying equipment, dew point minimum -20°C. Recommended time 2-4h.

## Injection advice

For unfilled polyamides, Domo recommends the use of high alloy steel with a low chromium content. For example: X38CrMoV5-1 (EN Norm) - 1.2367 /1.2343 (DIN Norm). In the case of high requirements on surface quality a mould temperature of up to 120°C can be considered. The processing parameters like processing temperatures are a recommendation and can be adjusted in function of injection machine size, part geometry / design.

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