

INJECTION DATASHEET

Zytel® 103HSL NC010

NYLON RESIN

Zytel® 103HSL NC010 is a heat stabilized, lubricated polyamide 66 resin for injection molding.

General Information

Resin Identification ISO 1043

Density ISO 1183

Drying

Drying Recommended

Drying Temperature**

Drying Time*

Processing Moisture Content - Optimum**

Processing Moisture Content

PA66

1140/- kg/m³

yes

80 °C

2 - 4 h

0.1 %

≤0.2 %

Temperature settings

Melt Temperature Optimum

Min. melt temperature***

Max. melt temperature

Mold Temperature Optimum

Min. mold temperature

Max. mold temperature

290 °C

280 °C

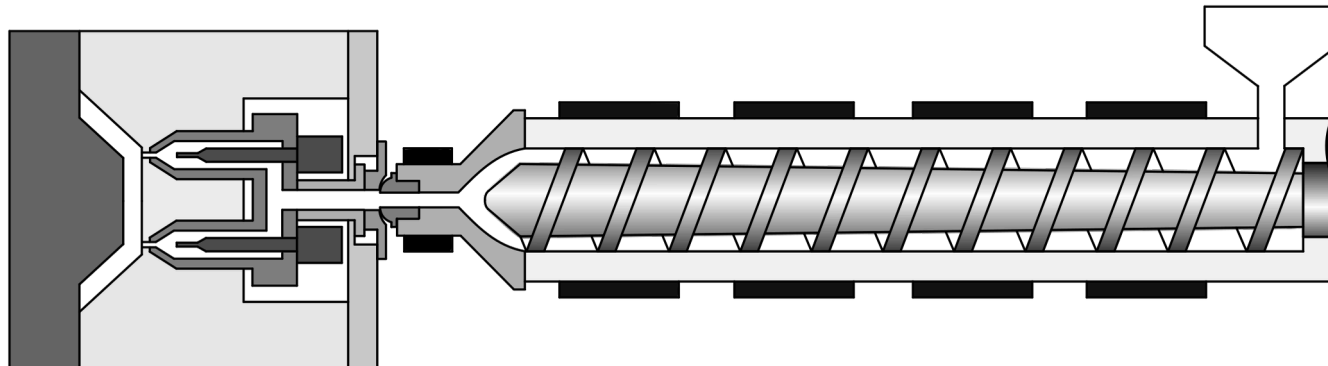
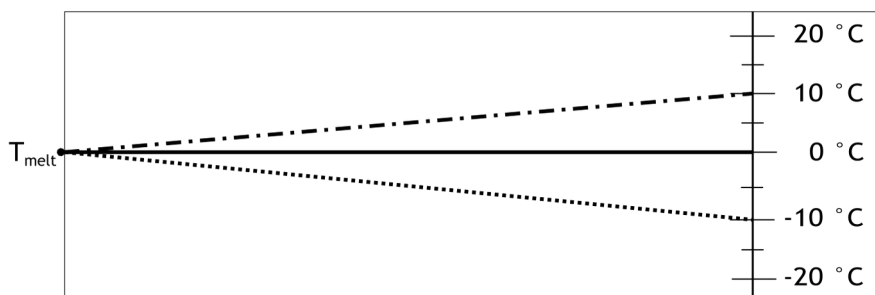
300 °C

70 °C

50 °C

90 °C

| | |
|---------------|-------|
| 3 D (< 3 min) | ----- |
| 2 D (3-5 min) | ————— |
| 1 D (> 5 min) | |



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Recommended general settings

| | |
|--------------------------------------------------|--------------|
| Residence time - optimum range | |
| Residence time - maximum | 3 - 5 min |
| Hold pressure range | 10 min |
| Hold Pressure Time | 50 - 100 MPa |
| (h is the max. wall thickness of the part in mm) | $h^2 + 2$ s |
| Max. screw tangential speed | 0.4 m/s |

$$\text{Residence time} = \frac{8 \cdot \text{screw } \varnothing [\text{mm}] \cdot \text{cycle time [s]}}{60 \cdot \text{dosing stroke [mm]}}$$

Hot runner residence time not included in calculation

Special precautions

During molding, use proper protective equipment and adequate ventilation. Avoid fumes and limit the residence time and temperature of the resin in the machine.

Links for further information

[Trouble Shooting Guide](#)

For further information e.g. on Shrinkage, Hot runner systems, Venting, Gating, Drying and moisture measurement, Regrind, Purging, please refer to the [detailed Molding Guide](#).

Footnotes:

- * Improper storage may lead to longer drying times
- ** Excessive drying may lead to viscosity increase during processing. A discoloration of natural colored materials is possible.
- *** Using melt temperature lower than recommended could create unmelt, leading to weak parts