

Zytel® ST811HS NC010

NYLON RESIN

Zytel® ST811HS is a flexible, heat stabilized Super Tough polyamide 6 resin developed for extrusion and injection molding applications such as cable and rope jacketing, hose inner cores and fasteners and ski binding parts.

General Information

Resin Identification ISO 1043

Density ISO 1183

PA6-HI

1040/- kg/m³

Drying

Drying Recommended

Drying Temperature**

Drying Time*

Processing Moisture Content - Optimum**

Processing Moisture Content

yes

60 °C

2 - 4 h

0.1 %

≤0.2 %

Temperature settings

Melt Temperature Optimum Internal

Min. melt temperature***

Max. melt temperature

Mold Temperature Optimum

Min. mould temperature

Max. mould temperature

270 °C

260 °C

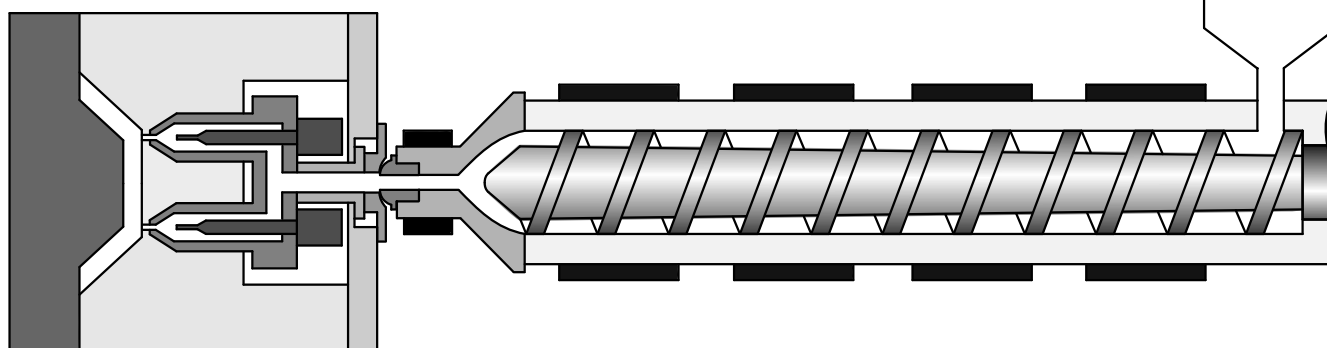
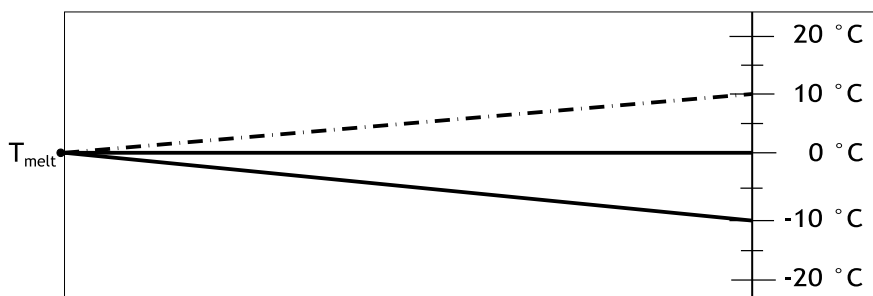
280 °C

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	3 - 5 min
Residence time - maximum	10 min
Hold pressure range	50 - 100 MPa
Hold Pressure Time (h is the max. wall thickness of the part in mm)	$1.5h^2 + 2$ s
Max. screw tangential speed	≤0.3 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