

# INJECTION DATASHEET

## ZYTEL® 73G40HSL ECO-R 311 BLK1 (PRELIMINARY) NYLON RESIN

Zytel® 73G40HSL ECO-R 311 BLK1 incorporates 30% of post-industrial recycled content by weight in the finished product. It is a 40% Glass Reinforced, Heat Stabilized, Polyamide 6 designed for Automotive parts requiring high thermal resistance, Household appliances and Electrical devices.

### General Information

Resin Identification ISO 1043  
Density ISO 1183

PA6-GF40(R30)  
1470/- kg/m<sup>3</sup>

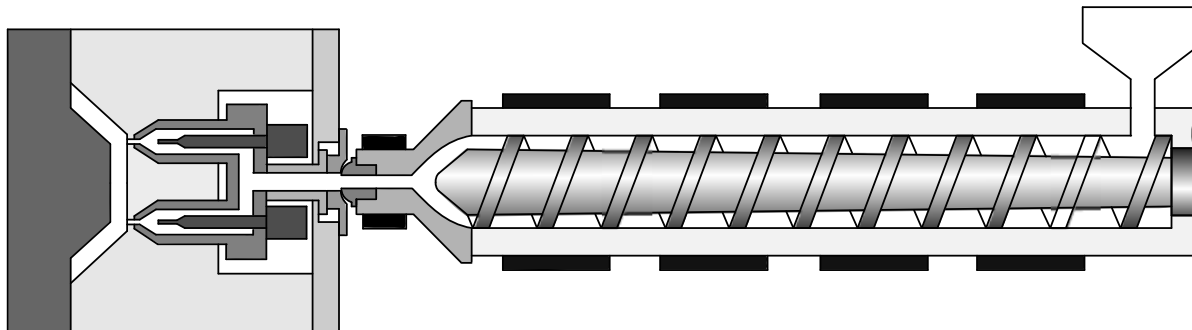
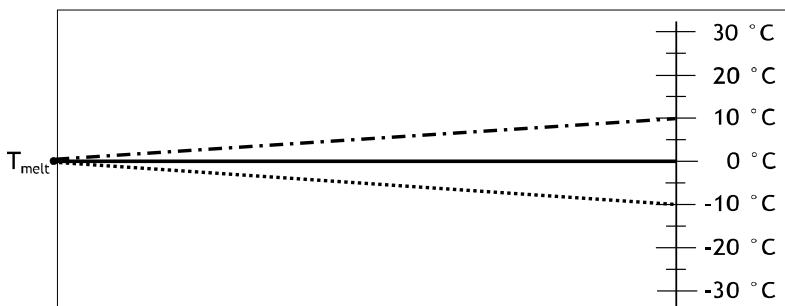
### Drying

Drying Recommended yes  
Drying Temperature\*\* 80 °C  
Drying Time\* 2 - 4 h  
Processing Moisture Content - Optimum\*\* 0.1 %  
Processing Moisture Content ≤0.15 %

### Temperature settings

Melt Temperature Optimum 250 °C  
Min. melt temperature\*\*\* 235 °C  
Max. melt temperature 280 °C  
Mold Temperature Optimum 80 °C  
Min. mould temperature 60 °C  
Max. mould temperature 120 °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 - 7 min
Residence time - maximum	10 min
Max. screw tangential speed	≤0.2 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

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The above data are preliminary and are subject to change as additional data are developed on subsequent lots.

NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colourants or other additives may cause significant variations in data values. Properties of moulded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design, processing conditions and environmental exposure. Other than those products expressly identified as medical grade (including by MT® product designation or otherwise), Celanese's products are not intended for use in medical or dental implants. Regardless of any such product designation, any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use. To the best of our knowledge, the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy and completeness of such information. The information contained in this publication should not be construed as a promise or guarantee of specific properties of our products. It is the sole responsibility of the users to investigate whether any existing patents are infringed by the use of the materials mentioned in this publication. Moreover, there is a need to reduce human exposure to many materials to the lowest practical limits in view of possible adverse effects. To the extent that any hazards may have been mentioned in this publication, we neither suggest nor guarantee that such hazards are the only ones that exist. We recommend that persons intending to rely on any recommendation or to use any equipment, processing technique or material mentioned in this publication should satisfy themselves that they can meet all applicable safety and health standards. We strongly recommend that users seek and adhere to the manufacturer's current instructions for handling each material they use, and entrust the handling of such material to adequately trained personnel only. Please call the telephone numbers listed for additional technical information. Call Customer Services for the appropriate Materials Safety Data Sheets (MSDS) before attempting to process our products.

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