

Nylene® 5133

TECHNICAL DATASHEET

TDS Ref # 341 Reviewed: 4/24/2018

DESCRIPTION

- Nylene 5133 is a glass fiber-reinforced nylon 6/6 featuring high tensile strength and stiffness.

| PROPERTIES | TEST METHOD | UNIT | VALUE |
|------------------------------|-------------|---------------|-------------------|
| PHYSICAL PROPERTIES | | | |
| Mold Shrinkage | n/a | in/in | 0.002 |
| Specific Gravity | D792 | n/a | 1.36 |
| MECHANICAL PROPERTIES | | | |
| Elongation @ Break | D638 | [%] | 7 |
| Flexural Modulus | D790 | psi (MPa) | 1,150,000 [7,930] |
| Notched Izod @ 23°C | D256 | ftlb/in (J/m) | 1.9 [102] |
| Tensile Strength | D638 | psi (MPa) | 23,500 [162] |
| THERMAL PROPERTIES | | | |
| DTUL @ 1820 kPa | D648 | °F (°C) | 460 [238] |
| Melt Point | D3418 | °F (°C) | 490 [254] |

NOTES

- Testing conducted on dry-as-molded specimens at 73°F (22.8°C)

PROCESSING CONSIDERATIONS: PA 6/6 GLASS REINFORCED > 15%

| °F (°C) | Rear Zone | 500-560 (260-293) | <p>Melt Temperature: Nylene PA6/6 melts at 490 °F (254°C), actual melt temperatures of 540-600 (282-316°C) are permissible, depending on residence time and shot size.</p> <p>Mold Temperature: 120-200 °F (49-93°C), highly filled grades require 180-200 °F (82-93°C) to obtain the best overall surface appearance, higher temperatures will increase crystallinity.</p> <p>Residence Time: should not exceed 6 minutes if possible, less with higher melt temperatures.</p> <p>Shot Size: should be between 25-75% of barrel capacity.</p> <p>Fill Rate: fast fill rates are suggested for best surface appearance.</p> <p>Regrind Level: typically no more than 25% is recommended, with higher levels possible for unfilled grades depending on the end use requirements. Make certain regrind is properly dried to virgin moisture levels.</p> <p>Drying Temperature: 150-180 °F (65-182°C) (for 2-4 hours, Nylene PA6/6 should be dried to less than 0.20% moisture for optimum performance. Drying longer than 4 hours or at higher temperatures may cause oxidation of the polymer or remove essential volatiles.</p> |
|----------|-------------|----------------------|--|
| | Center Zone | 530-570 (277-299) | |
| | Front Zone | 540-590 (282-310) | |
| | Nozzel | 535-585 (279-307) | |
| | Melt Temp. | 550-600 (287-316) | |
| PRESSURE | Injection | 5-15,000 | |
| | Hold | 4-12,000 | |
| | Back | 0-50 | |

CHARACTERISTICS

Resin Type: Nylon 6/6
Product Characteristics:
Glass Reinforced

INJECTION MOLDING PROCESSING

Prime Grade

FEATURES

- High Temperature Capibility
- High Stiffness
- Chemical Resistance
- High Strength

MARKETS USED

- Automotive Applications
- General Applications
- Electrical Applications
- Industrial Applications
- Furniture & Household

APPLICATIONS

- Appliance Footing
- Bracket
- Coil Bobbins
- Electrical Connector
- Intake Manifold
- Light Reflector
- Oil Fitting
- Pulley

AUTOMOTIVE SPECIFICATION

- ESEM4D287- A
- ESE-M4D287-A

DISCLAIMER

The data set forth herein has been carefully compiled by Nylene in our laboratories. Values shown are typical properties and not specifications. Since processing variables will affect properties, the reproducibility of our data in a customer's testing facility is not guaranteed. There is no warranty of any kind, either expressed or implied, applicable to the use of this information, and the user assumes all risk and liability in connection therewith.



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