

# Nylene® 7250C HS

## TECHNICAL DATASHEET

TDS Ref # 154 Reviewed: 7/23/2013

### DESCRIPTION

- Glass and ceramic fiber reinforced nylon 6 injection molding material.
- Designed to provide high dimensional stability, very high stiffness, and a hard surface, while maintaining the heat and chemical resistance typical of nylon products.
- Suitable for such uses as valve bodies, pump housings and other applications which require this unique set of characteristics.

| PROPERTIES                   | TEST METHOD | UNIT               | VALUE              |
|------------------------------|-------------|--------------------|--------------------|
| <b>PHYSICAL PROPERTIES</b>   |             |                    |                    |
| Specific Gravity             | D792        | n/a                | 1.59               |
| <b>MECHANICAL PROPERTIES</b> |             |                    |                    |
| Flexural Modulus             | D790        | psi (MPa)          | 1,500,000 (10,345) |
| Notched Izod @ 23°C          | D256        | ft. lb./ in. (J/m) | 1.3 (70)           |
| Tensile Strength             | D638        | psi (MPa)          | 18,000 (124)       |
| <b>THERMAL PROPERTIES</b>    |             |                    |                    |
| Melt Point                   | D3418       | °F (°C)            | 420 (215)          |

### NOTES

- Testing conducted on dry-as-molded specimens at 73°F

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

|          |             |                      |
|----------|-------------|----------------------|
| °F (°C)  | Rear Zone   | 480-530<br>(249-277) |
|          | Center Zone | 500-550<br>(260-288) |
|          | Front Zone  | 520-570<br>(271-299) |
|          | Nozzel      | 520-570<br>(271-299) |
|          | Melt Temp.  | 550-575<br>288-302   |
| PRESSURE | Injection   | 8-18,000             |
|          | Hold        | 6-15,000             |
|          | Back        | 0-50                 |

**Melt Temperature:** Nylene PA6 melts at 428°F, (220°C) actual melt temperatures of 440-560°F (227-293°C) are permissible, depending on residence time and shot size.

**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.

**Residence Time:** should not exceed 6 minutes if possible, less with higher melt temperatures.

**Shot Size:** should be between 25-75% of barrel capacity.

**Fill Rate:** fast fill rates are suggested for best surface appearance.

**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.

**Drying Temperature:** 150-180°F (66-82°C) for 2-4 hours, Nylene PA6 should be dried to less than 0.20% moisture for optimum performance. Drying longer than 4 hours or at higher temperatures may cause discoloration of the polymer or adversely affect important physical properties.

### CHARACTERISTICS

Resin Type: Nylon 6

Product Characteristics:

Glass Reinforced, Ceramic Reinforced

### INJECTION MOLDING PROCESSING

Specialty Grade

### MARKETS USED

- General Applications

### APPLICATIONS

- Hydraulic couplings
- Hydraulic fittings
- Pump Housings

### 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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