

Nylene® 5213-02

TECHNICAL DATASHEET

TDS Ref # 127 Reviewed: 7/22/2013

DESCRIPTION

- Glass fiber reinforced nylon 6
- Heat and chemical resistance and excellent surface appearance associated with nylon 6 resins
- Improved strength and stiffness properties over unreinforced nylon

PROPERTIES	TEST METHOD	UNIT	VALUE
PHYSICAL PROPERTIES			
Mold Shrinkage	n/a	in/in	0.005
Specific Gravity	D792	n/a	1.21
MECHANICAL PROPERTIES			
Elongation	D638	%	3
Flexural Modulus	D790	psi (MPa)	700,000 [4828]
Notched Izod @ 23°C	D256	ftlb/in (J/m)	0.8 43
Tensile Strength	D638	psi (MPa)	15,000 [110]
THERMAL PROPERTIES			
DTUL @ 264 psi/1.82 MPa	D648	°F (°C)	370 [188]
Melt Point	D3418	°F (°C)	420 [215]

NOTES

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

PROCESSING CONSIDERATIONS: PA 6 GLASS REINFORCED < 15%

°F (°C)	Rear Zone	440-500 (227-260)	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.		
	Center Zone	460-520 (238-271)		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.	
	Front Zone	480-540 (249-282)			
	Nozzel	480-540 (249-282)			Residence Time: should not exceed 6 minutes if possible, less with higher melt temperatures
	Melt Temp.	480-540 (249-282)			Shot Size: should be between 25-75% of barrel capacity.
PRESSURE	Injection	5-15,000	Fill Rate: fast fill rates are suggested for best surface appearance.		
	Hold	4-12,000	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.		
	Back	0-50	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

INJECTION MOLDING PROCESSING

Economy Grade

FEATURES

- Higher stiffness, good surface
- Good feel

MARKETS USED

- Automotive Applications
- General Applications
- Tool & Appliance
- Furniture & Household

APPLICATIONS

- Bracket
- Door Handle
- Housing
- Knife Handles
- Power Tool Housing
- Seat Adjuster Levers
- Stove Handles

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.



Headquarters and Facility:

55 Haul Road, Wayne, NJ 07470
P: 973-694-4141 | F: 973-694-3549

North American Sales Office:

31700 Telegraph Rd. Suite 235, MI 48025
P: 248-377-6769 | F: 248-377-3845

Nylene Custom Resins Facility:

1421 Hwy 136 W. Henderson, KY 42420
P: 270-826-7641 | TF: 800-626-7050

Nylene Canada Facility

200 McNab Street, Arnprior ON, K7S 3P2
P: 613-623-3191 | TF: 800-267-7394

For a complete listing of our global offices, visit:

www.nylene.com/contactus

www.nylene.com | info@nylene.com

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