

# Nylene® 4214

## TECHNICAL DATASHEET

TDS Ref # 108 Reviewed: 4/24/2018

### DESCRIPTION

- Impact-modified with excellent molding characteristics and very good physical properties

| PROPERTIES                   | TEST METHOD | UNIT          | VALUE           |
|------------------------------|-------------|---------------|-----------------|
| <b>PHYSICAL PROPERTIES</b>   |             |               |                 |
| Specific Gravity             | D792        | n/a           | 1.09            |
| <b>MECHANICAL PROPERTIES</b> |             |               |                 |
| Elongation @ Break           | D638        | [%]           | 100             |
| Flexural Modulus             | D790        | psi (MPa)     | 251,000 [1,730] |
| Notched Izod @ 23°C          | D256        | ftlb/in (J/m) | 16 [850]        |
| Tensile Modulus              | D638        | psi (MPa)     | 280,000 [1,900] |
| Tensile Strength             | D638        | psi (MPa)     | 6780 [47]       |
| <b>THERMAL PROPERTIES</b>    |             |               |                 |
| DTUL @ 1820 kPa              | D648        | °F (°C)       | 110 [43]        |
| Melt Point                   | D3418       | °F (°C)       | 420 [216]       |

### NOTES

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

### PROCESSING CONSIDERATIONS: PA 6 IMPACT MODIFIED

|          |             |                      |
|----------|-------------|----------------------|
| °F (°C)  | Rear Zone   | 440-500<br>(227-260) |
|          | Center Zone | 460-520<br>(238-271) |
|          | Front Zone  | 480-540<br>(249-282) |
|          | Nozzel      | 480-540<br>(249-282) |
|          | Melt Temp.  | 480-540<br>(249-282) |
| PRESSURE | Injection   | 7-15,000             |
|          | Hold        | 5-12,000             |
|          | Back        | 0-50                 |

**Melt Temperature:** 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:  
Impact Modified

### INJECTION MOLDING PROCESSING

Prime Grade

### FEATURES

- Slightly higher toughness with stiffness

### MARKETS USED

- Automotive Applications

### APPLICATIONS

- Seat Pan

### 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](http://www.nylene.com/contactus)

[www.nylene.com](http://www.nylene.com) | [info@nylene.com](mailto:info@nylene.com)

Copyright ©2019, Nylene. All rights reserved. Nylene is a designated trademark of Polymeric Resources Corporation.