

# Nylene® 2408 HSSP

## TECHNICAL DATASHEET

TDS Ref # 74 Reviewed: 5/10/2012

### DESCRIPTION

- Modified nylon 6 with very good physical properties and excellent extrusion characteristics to support extrusion of very complex profiles
- Especially useful for convoluted tubing.

| PROPERTIES                   | TEST METHOD | UNIT              | VALUE |
|------------------------------|-------------|-------------------|-------|
| <b>PHYSICAL PROPERTIES</b>   |             |                   |       |
| Density                      | ISO 1183    | g/cm <sup>3</sup> | 1.07  |
| <b>MECHANICAL PROPERTIES</b> |             |                   |       |
| Elongation @ Break           | ISO 527     | (%)               | 125   |
| Flexural Modulus             | ISO 178     | MPa               | 1,080 |
| Notched Izod @ 23°C          | ISO 180     | kJ/m <sup>2</sup> | 26    |
| Tensile Strength             | ISO 527     | MPa               | 40    |
| <b>THERMAL PROPERTIES</b>    |             |                   |       |
| DTUL @ 1800 kPa              | ISO 75      | °C                | 42    |
| Melt Point                   | D3418       | °C                | 246   |

### NOTES

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

### PROCESSING CONSIDERATIONS: EXTRUSION IMPACT MODIFIED

|              |               |                      |  |
|--------------|---------------|----------------------|--|
| Zone °F (°C) | Feed          | 450-470<br>(232-243) | <b>Residence Time:</b> Screw should not be left idle for more than 3-4 minutes with melt in the barrel. Excess residence will be visible as black carbon specs in the melt.  |
|              | Transition    | 470-500<br>(243-260) |  |
|              | Metering      | 490-530<br>(254-277) |  |
|              | Die           | 490-530<br>(254-277) |  |
|              | Melt Temp.    | 490-530<br>(254-277) |  |
| Line Rate    | 2 ½" extruder | 1.5 - 1.9 pph/rpm    | <b>Drying Temperature:</b> Although Nylene resins are packaged and delivered in a low moisture state, it is good material handling practice to use a hopper dryer to maintain dryness. Should pre-drying be necessary, use settings of 180 °F (82.2°C) air at dew point of -40 at a rate of 1 cu. ft. / hour per pound of resin and a residence time of 2-4 hours.             |
|              | 3 ½" extruder | 3.5 - 4.5 pph/rpm    |  |
|              | 4 ½" extruder | 6.5 - 7.5 pph/rpm    |  |
|              |               |                      | <b>Cooling and Sizing:</b> While both air and water can be used as the cooling medium, air is preferred. The use of air allows additional time for sizing and reduces residual stress. This aids in reducing warp, especially in profiles with varying wall sections. If water is used, heat the first section to above 100 °F (38°C) to reduce quenching and residual stress. |
|              |               |                      | <b>Die Design:</b> Draw down of 30% is typical for all dimensions except wall thickness.   |
|              |               |                      | <b>Land length:</b> should be around 10x wall thickness.   |

### CHARACTERISTICS

Resin Type: Nylon 6  
 Product Characteristics:  
 Impact Modified, Flex Modified,  
 Copolymer

### EXTRUSION PROCESSING

Tubing & Profile

### INJECTION MOLDING PROCESSING

Prime Grade

### MARKETS USED

- Automotive Applications
- Convoluted Tubing Industry

### APPLICATIONS

- Convoluted Tubing

### AUTOMOTIVE SPECIFICATION

- MS-DB41 CPN 5118

### 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)

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