

# Nylene® 4114-25 GF HRV

## TECHNICAL DATASHEET

TDS Ref # 1095 Reviewed: 9/11/2019

### DESCRIPTION

Nylene 4114-25 GF HRV is a compounded, 25% glass fiber-reinforced nylon 6/6 profile extrusion grade with excellent thermal stability.

PROPERTIES	TEST METHOD	UNIT	VALUE
<b>PHYSICAL PROPERTIES</b>			
Specific Gravity	D792	n/a	1.13
Ash Content	D5630	%	23 – 27 %
Mold Shrinkage	n/a	in/in	0.015-0.020
Relative Viscosity	D785	n/a	70
<b>MECHANICAL PROPERTIES</b>			
Flexural Modulus	D790	psi	925,000
Flexural Strength	D790	Psi	23,200
Notched Izod @ 23°C	D256	ft. lb./ in.	2.3
Tensile Modulus	D638	psi	900,000
Tensile Strength	D638	psi	17,000
<b>THERMAL PROPERTIES</b>			
Coefficient of Thermal Expansion	E 831	mm/mm °C (°F)	3.2 X 10 <sup>-5</sup>
DTUL @ 1820 kPa	D648	°C	230
Melt Point	D3418	°C	250 – 265
Thermal Conductivity-Through Plane	ASTM C177-85	W/(mK)	0.307 W/(mK) @ 31.35°C

### CHARACTERISTICS

**Resin Type:** Nylon 6/6

**Product Characteristics:**

Glass Reinforced

### EXTRUSION PROCESSING

Tubing & Profile

### 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.

### NOTES

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

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

°F (°C)	Rear Zone	500-560 (260-293)	<b>Melt Temperature:</b> 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.
	Center Zone	530-570 (277-299)	<b>Mold Temperature:</b> 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	540-590 (282-310)	<b>Residence Time:</b> should not exceed 6 minutes if possible, less with higher melt temperatures.
	Nozzel	535-585 (279-307)	<b>Shot Size:</b> should be between 25-75% of barrel capacity.
PRESSURE	Melt Temp.	550-600 (287-316)	<b>Fill Rate:</b> fast fill rates are suggested for best surface appearance.
	Injection	5-15,000	<b>Regrind Level:</b> 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.
	Hold	4-12,000	<b>Drying Temperature:</b> 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.
	Back	0-50	



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