



# Injection Plant Based Nylon - RICCI

Bio-Based Polyamide Resin w Glass Fiber

Model : RIC-1888/13

## Injection Grade

### Description

<b>Materials Description</b>	Approximately 55~65% Plant Based as it is derived from castor oil.
<b>Features</b>	Eco, ultra low viscosity with melt flow characteristics.
<b>Filler</b>	11% Long Glass Fiber w/ 2% Powder Form Glass Fiber
<b>Shape</b>	Pellets
<b>Processing Methods</b>	Injection Molding
<b>Visual</b>	Natural / Ture Colors

### Physical

	Condition	Unit	Test Method
<b>Relative Viscosity</b>	2.75	****	****
<b>NH2</b>	39.5	mmol/KG	****
<b>Water Content</b>	<2000 ppm	mg/KG	****

### Mechanical

	Condition	Unit	Test Method
<b>Tensile Modulus</b>	8.25	Kj/m2	ISO 180
<b>Tensile Strength</b>	99	MPa	ISO 527
<b>Elongation at Break</b>	4.65	MPa	ISO 527
<b>Flexural Modulus</b>	114	Mpa	ISO 178
<b>Flexural Strength</b>	23 C	Kj/m2	ISO 178
<b>Rockwell Hardness M</b>	70-75	HD	ASTM D2240

### Thermal

	Reading	Details	Unit	Test Method
<b>Heat Deflection Temp</b>	65	1.8MPa / 48H/ 23C/ 50% RH	Celsius	ISO 75
<b>Vicat Softening Temp</b>	208	48H/ 23C/ 50% RH	Celsius	ISO 306

### Humidity Concern

The polyamide resins arrive in moisture-protected packaging. If you didn't open the original packaging. Don't open before use to less drying time.

### Temperature Caution

Strongly recommend melt temperature in 280-305 °C. Due to bio-based polyamide are decompose sensitive, and overheat will decrease product properties. Do not over the maximum melt temperature 305 °C. Try to fix the mold temp or injection speed for regulating. Keep mold surface temperature in between 60-90 °C. Highly recommend the temperature on the maximum end for better mold flow performance. Shrinkage, brittle fracture effect almost under low mold surface temperature.

### Injection

	Normal Value	Unit	Test Method
<b>Dry Temp - Hot Blower</b>	105	Celsius	****
<b>Dry Period - Hot Blower</b>	4-8	Hours	****
<b>Nozzle Temp</b>	280-305	Celsius	****
<b>Melting Temp</b>	280-305	Celsius	****
<b>Barrel Bottom Temp</b>	230-270	Celsius	****
<b>Barrel Middle Temp</b>	270-300	Celsius	****
<b>Shot Head Temp</b>	270-300	Celsius	****
<b>Mold Temp</b>	70-90	Celsius	****

### Remarks

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