

# HYOSUNG Polypropylene

The Next Circular Economy

# R1001N

Polypropylene Random Copolymer For High Clarity Injection Molding

## **Product Description**

**Hyosung Polypropylene R1001N** is a nucleated polypropylene random copolymer that features excellent transparency and high flowability. This grade is designed to be processed in injection molding equipment like food containers and housewares. It exhibits high transparency, good stiffness/impact strength balance, high gloss and low TVOC (Total Volatile Organic Compounds).

#### **Characteristics**

**Typical Application** Food containers / Transparent containers / Housewares / Stationery

Features High transparency / Excellent flowability & Processability / Phthalate-Free / Bisphenol Free /

Non-Peroxide Cracking / Excellent stiffness and impact strength balance / UL Energy Saving

## **Typical Properties**

Characteristics		Method	Value	Unit
Physical				
Melt Index (230°C, 2.16kg)		ASTM D1238	65.0	g/10min
Density		ASTM D792	0.90	g/cm³
Mechanical		<u></u>		
Tensile Strength at Yield		ASTM D638	300	kg/cm²
Flexural Modulus		ASTM D790	11,000	kg/cm²
Notched Izod Impact Strength (23°C)		ASTM D256	5.0	kg·cm/cm
Rockwell Hardness		ASTM D785	80	R-scale
Thermal		<u></u>		
Vicat Softening point (1kgf)		ASTM D1525	130	°C
Heat Deflection Temperature (4.6kgf/m²)		ASTM D648	90	℃
Additional Proper	ties	<u>i</u>		
Haze	1mm – Injection molded disc	ASTM D1003	12	%
	2mm – Injection molded disc		20	%

The values listed above are typical values for reference purpose only and shall not be construed as specifications.

#### **Contacts**

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# HYOSUNG VINA CHEMICALS

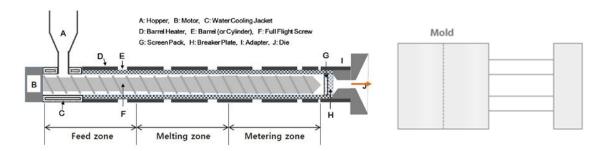
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## **Processing Conditions**



Specifications	Unit	Recommended Conditions
Nozzle Temperature	°C	210 ~ 230
Front Temperature	℃	210 ~ 230
Middle Temperature	°C	210 ~ 230
Rear Temperature	°C	190 ~ 210
Mold Temperature	°C	20 ~ 50
Back Pressure	MPa	0.3 ~ 0.7
Screw Speed	rpm	40 ~ 70

#### Considerations

Due to variations in screw design and heat efficiency according to types of facilities, optimal conditions for each facility may differ. Therefore, the optimal temperature conditions for each facility must be taken into consideration depending on extruding pressure, cooling efficiency, changes in MI of the final product, appearances of the final product, etc.

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## **Energy Savings**

**Hyosung Polypropylene R1001N** provides improved aesthetics at significantly lower process temperatures that leads to lowered energy consumptions, shortened cycle time and improved productivity. It enables an average of 10% energy savings for production of clarified PP parts.





## **Health, Safety and Food Contact Regulations**

**Hyosung Polypropylene R1001N** complies with FDA requirements in the code of Federal Regulations in 21 CFR 177. 1520 for food contact and European Commission Regulation (EU) No 10/2011 and its amendment (EU) No 2016 / 1416 with regard to plastic materials and articles intended to come into contact with food.

### Storage and Handling

This product should be stored in dry condition at temperature below 40°C and protected from UV-light. When condensation is visible or can be expected, pre-drying is recommended. (Drying condition: 80~100°C/2~4hours at air circulated condition).

#### Disclaimer

All information, including product characteristics, applications and properties are for reference purpose only and shall not be construed as specifications. Before using this product, customers should carefully review the instructions for use of the product to determine whether the product is suitable for the customer's particular purpose. The customer is responsible for the appropriate, safe and legal use, processing and handling of this product. HYOSUNG VINA CHEMICALS CORPORATION assumes no legal responsibility or liability for the contents of this document. We reserve the right to change the contents of this document without prior notice. This document is copyrighted by HYOSUNG VINA CHEMICALS CORPORATION.

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