TECHNICAL DATA SHEET

HYOSUNG Polypropylene
The Next Circular Economy

R701G

Random Copolymer
For Disposable Syringes

Product Description

HYOSUNG Polypropylene R701 is specially designed polypropylene random copolymer that features high transparency and high processibility. It is suitable for disposable syringes that requires gamma-ray sterilization. **PP R701** complies with United States Pharmacopeia (USP) Class VI and is free of phthalate and peroxide.

Application

Disposable syringes parts

Features

Gamma-ray sterilization available
High transparency
Phthalate free

Properties

Properties	Test Method	Typical Value	Unit
Resin Properties			
Melt Index(230℃, 2.16kg)	ASTM D1238	20	g/10min
Density	ASTM D792	0.90	g/cm^3
Mechanical Properties			
Tensile Strength at Yield	ASTM D638	310	kg/cm^2
Flexural Modulus	ASTM D790	12,000	kg/cm^2
Izod Impact Strength, Notched at 23℃	ASTM D256	6.0	kg·cm/cm
Rockwell Hardness	ASTM D785	90	R-Scale
Haze (2mm)	ASTM D1003	20	%

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

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℃ / 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 CHEMICAL 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 CHEMICAL CORPORATION.

Contacts

Head Office (06578) 235, Banpo-daero, Seocho-gu, Seoul, KR
Tel: +82-2-2146-5439
Online www.hyosungchemical.com

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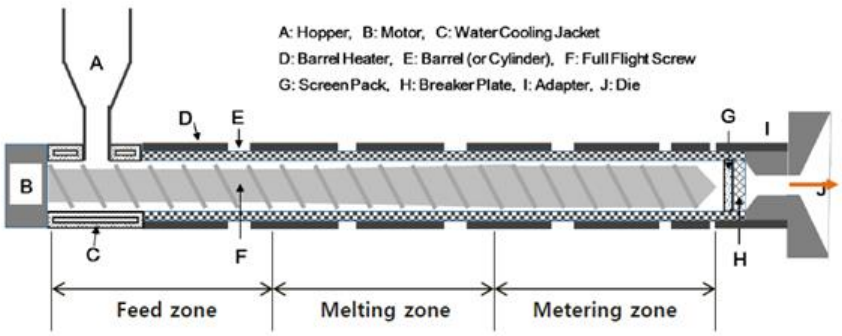
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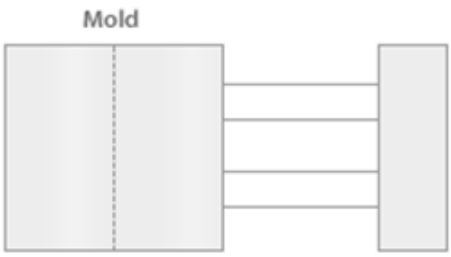
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Processing Conditions





Specifications	Unit	Recommended Conditions
Nozzle Temperature	℃	210 ~ 230
Front Temperature	℃	210 ~ 230
Middle Temperature	℃	210 ~ 230
Rear Temperature	℃	190 ~ 210
Mold Temperature	℃	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.

Health, Safety and Food Contact Regulations

PP R701 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 amendments up to (EU) No 2023/1627 with regard to plastic materials and articles intended to come into contact with food.

Energy Savings

PP R701 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.

Milliken
Millad® NX™ 8000
The New Standard In Clear Polypropylene

UL VALIDATED
• MILLAD® NX™ 8000 ENABLES AN AVERAGE OF 10% ENERGY SAVINGS FOR PRODUCTION OF CLARIFIED PP PARTS
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ISO 9001, ISO 14001 kfq® REGISTERED FIRM