

Product Data Sheet

KUMHO POLYCHEM

Innoprene™ 1857N

Thermoplastic Rubber

Product Description

Innoprene™ 1857N is thermoplastic rubber which incorporates the elasticity of thermoset rubber with the plasticity of thermoplastics. This grade is specially designed for plumbing applications in contact with potable water. It can be formed by extrusion, blow molding and injection molding for various applications such as tubing, seals, gaskets and other articles.

General

Applications	Plumbing Parts – Potable Water Seals and Gaskets Industrial – Seals and Gaskets Tubing		
Certification	NSF 61 – STD		
Color	Natural		
Form(s)	Pellets		
Processing	Extrusion	Injection Molding	Blow Molding
Revision Date	2021-04-01		

Physical Properties	Unit	Typical Value	Test Method
Specific Gravity	–	0.96	ISO 1183
Hardness (Shore A, 15 sec.)	–	87	ISO 868
Tensile Strength	Kgf/cm ²	146	ISO 37
Elongation	%	540	ISO 37
Modulus at 100%	Kgf/cm ²	53	ISO 37
Tear Strength	Kgf/cm	45	ISO 34-1
Compression set (70°C, 22 hrs)	%	48	ISO 815

Thermal Property	Unit	Typical Value	Test Method
Brittleness Temperature	°C	–59	ISO 812

Injection Molding Conditions

Drying Temperature	85 °C
Drying Time	3.0 hrs
Rear Temperature	180 °C
Middle Temperature	180 ~ 195 °C
Front Temperature	200 °C
Nozzle Temperature	205 °C
Processing(Melt) Temperature	195 ~ 205 °C
Mold Temperature	10 ~ 60 °C
Cooling Time	20 ~ 30 sec / 100 ~175 g
Injection Rate	Fast

Extrusion Conditions

Drying Temperature	85 °C
Drying Time	3.0 hrs
Feed Temperature	180 °C
Zone 1 ~ Zone 3 Temperature	180 ~ 195 °C
Head Temperature	200 °C
Die Temperature	205 °C
Processing(Melt) Temperature	195 ~ 205 °C
Screen Pack	20 ~ 60 mesh
Back Pressure	5.0 to 20.0 Mpa

The property values shown are measured on injection molded specimens. They are based on a limited number of tests. Therefore, should not be interpreted as product specifications. These values may shift slightly as additional data are accumulated.

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