

Innoprene™ 1640BK

Thermoplastic Rubber

Product Description

Innoprene™ 1640BK is thermoplastic rubber which incorporates the elasticity of thermoset rubber with the plasticity of thermoplastics. This grade can be formed by injection molding, extrusion and blow molding for various applications such as seals, gaskets, bumpers and other articles.

General

| | | | |
|---------------|---|-----------|--------------|
| Applications | Automotive – Air Induction System, Plugs, Bumpers, Seals and Gaskets Industrial – Seals and Gaskets Consumer Applications – Gaskets, Seals, Electronics Tubing | | |
| Color | Black | | |
| Form(s) | Pellets | | |
| Processing | Injection Molding | Extrusion | 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.) | – | 64 | ISO 868 |
| Tensile Strength | Kgf/cm ² | 85 | ISO 37 |
| Elongation | % | 560 | ISO 37 |
| Modulus at 100% | Kgf/cm ² | 29 | ISO 37 |
| Tear Strength | Kgf/cm | 24 | ISO 34-1 |
| Compression set [125°C, 70 hrs] | % | 35 | ISO 815 |

| Thermal Property | Unit | Typical Value | Test Method |
|-------------------------|------|---------------|-------------|
| Brittleness Temperature | °C | –60 | ISO 812 |

| Aging Properties [125°C, 168 hrs] | Unit | Typical Value | Test Method |
|-----------------------------------|------|---------------|-------------|
| Change in Shore Hardness | – | +1 | ISO 188 |
| Change in Tensile Strength | % | –18 | ISO 188 |
| Change in Elongation | % | –20 | ISO 188 |

Injection Molding Conditions

| | |
|------------------------------|--------------------------|
| Drying Temperature | 85 °c |
| Drying Time | 3.0 hrs |
| Rear Temperature | 175 °c |
| Middle Temperature | 180 ~ 190 °c |
| Front Temperature | 195 °c |
| Nozzle Temperature | 200 °c |
| Processing(Melt) Temperature | 190 ~ 200 °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 | 175 °c |
| Zone 1 ~ Zone 3 Temperature | 180 ~ 190 °c |
| Head Temperature | 195 °c |
| Die Temperature | 200 °c |
| Processing(Melt) Temperature | 190 ~ 200 °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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