

# Innoprene 1350N/B

Thermoplastic Vulcanizate

Kumho Polychem Co., Ltd.

Message:

Innoprene 1350N/B is a thermoplastic vulcanized rubber (TPV) material. This product is available in Europe or the Asia-Pacific region. The processing methods are: blow molding, extrusion, calendering or injection molding.

The main features of the Innoprene 1350N/B are:

- environmental protection/green
- Good tear strength
- Good flexibility
- good weather resistance
- chemical resistance

Typical application areas include:

- Electrical/electronic applications
- electrical appliances
- home apps
- building applications
- Automotive Industry

| General Information |                                    |
|---------------------|------------------------------------|
| Features            | Low compressive deformability      |
|                     | Recyclable materials               |
|                     | Good electrical performance        |
|                     | Good flexibility                   |
|                     | Good tear strength                 |
|                     | Ozone resistance                   |
|                     | Good chemical resistance           |
|                     | Fatigue resistance                 |
|                     | Good weather resistance            |
|                     | Heat resistance, high              |
| Uses                | Electrical/Electronic Applications |
|                     | Electrical appliances              |
|                     | Household goods                    |
|                     | Building materials                 |
|                     | Application in Automobile Field    |
|                     | Business equipment                 |
|                     | Sporting goods                     |
| Appearance          | Black                              |
|                     | Natural color                      |
| Forms               | Particle                           |
| Processing Method   | Blow molding                       |

Extrusion  
Calendering  
Injection molding

| Physical                                                 | Nominal Value | Unit              | Test Method        |
|----------------------------------------------------------|---------------|-------------------|--------------------|
| Specific Gravity                                         |               |                   |                    |
| --                                                       | 0.948         | g/cm <sup>3</sup> | ASTM D792          |
| 25°C                                                     | 0.948         | g/cm <sup>3</sup> | ISO 1183           |
| Hardness                                                 | Nominal Value | Unit              | Test Method        |
| Durometer Hardness (Shore A, 25°C)                       | 38            |                   | ISO 868            |
| Elastomers                                               | Nominal Value | Unit              | Test Method        |
| Tensile Stress (100% Strain, 25°C)                       | 0.981         | MPa               | ASTM D412, ISO 37  |
| Tensile Strength (Yield, 25°C)                           | 4.41          | MPa               | ASTM D412, ISO 37  |
| Tensile Elongation (Break, 25°C)                         | 670           | %                 | ASTM D412, ISO 37  |
| Tear Strength                                            |               |                   |                    |
| 25°C                                                     | 19.6          | kN/m              | ASTM D624          |
| 25°C                                                     | 20            | kN/m              | ISO 34-1           |
| Compression Set                                          |               |                   |                    |
| 70°C, 22 hr                                              | 30            | %                 | ASTM D395          |
| 120°C, 70 hr                                             | 38            | %                 | ASTM D395          |
| 120°C, 70 hr <sup>1</sup>                                | 38            | %                 | ISO 815            |
| Aging                                                    | Nominal Value | Unit              | Test Method        |
| Change in Tensile Strength in Air (150°C, 168 hr)        | -6.0          | %                 | ASTM D412, ISO 188 |
| Change in Ultimate Elongation in Air (150°C, 168 hr)     | -10           | %                 | ASTM D412, ISO 188 |
| Change in Shore Hardness in Air (Shore A, 150°C, 168 hr) | 1.0           |                   | ISO 188            |
| Change in Mass                                           |               |                   | ASTM D471          |
| 25°C, 168 hr, in 10% hydrochloric acid                   | 4.0           | %                 | ASTM D471          |
| 25°C, 168 hr, in 50% sodium hydroxide                    | 1.0           | %                 | ASTM D471          |
| Thermal                                                  | Nominal Value | Unit              | Test Method        |
| Brittleness Temperature (Type B)                         | -62.0         | °C                | ISO 812            |
| Additional Information                                   | Nominal Value |                   | Test Method        |
| UV Resistance - 1000hr                                   |               |                   | SAE J1960          |
| Injection                                                | Nominal Value | Unit              |                    |
| Drying Temperature                                       | 85.0          | °C                |                    |
| Drying Time                                              | 3.0           | hr                |                    |
| Rear Temperature                                         | 160 - 180     | °C                |                    |
| Middle Temperature                                       | 180 - 200     | °C                |                    |
| Front Temperature                                        | 200           | °C                |                    |
| Nozzle Temperature                                       | 200 - 220     | °C                |                    |
| Processing (Melt) Temp                                   | 190 - 230     | °C                |                    |

| Mold Temperature                   | 10.0 - 60.0   | °C   |
|------------------------------------|---------------|------|
| Injection Rate                     | Fast          |      |
| Injection instructions             |               |      |
| Cooling Time: 20-30 sec / 100-175g |               |      |
| Extrusion                          | Nominal Value | Unit |
| Drying Temperature                 | 85.0          | °C   |
| Drying Time                        | 3.0           | hr   |
| Hopper Temperature                 | 160 - 170     | °C   |
| Cylinder Zone 1 Temp.              | 180 - 200     | °C   |
| Cylinder Zone 2 Temp.              | 180 - 200     | °C   |
| Cylinder Zone 3 Temp.              | 180 - 200     | °C   |
| Adapter Temperature                | 200           | °C   |
| Melt Temperature                   | 190 - 230     | °C   |
| Die Temperature                    | 180 - 210     | °C   |
| Back Pressure                      | 5.00 - 20.0   | MPa  |
| Extrusion instructions             |               |      |
| Screen Pack: 20-60 mesh            |               |      |
| NOTE                               |               |      |

1. Type a

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