

# Styrolution PS ECO 168N BC100

Please Select

## TECHNICAL DATASHEET

### DESCRIPTION

Styrolution® PS ECO 168N BC100 is a high molecular weight, heat resistant grade with high mechanical strength. It is suitable for physically or chemically expanded extruded sheet. It is also suitable for use as blend component with high impact polystyrene or Styrolux. Styrolution® PS ECO 168N BC100 contains bio-attributed content from ISCC PLUS certified feedstock.

### FEATURES

- High molecular weight
- High heat resistance
- High mechanical strength
- UL 94 HB (Antwerp only)

### APPLICATIONS

- Foam sheet for meat & fruit trays
- BOPS sheet

| Property, Test Condition                                      | Standard    | Unit                    | Values |
|---------------------------------------------------------------|-------------|-------------------------|--------|
| <b>Rheological Properties</b>                                 |             |                         |        |
| Melt Volume Rate, 200 °C/5 kg                                 | ISO 1133    | cm <sup>3</sup> /10 min | 1.5    |
| <b>Mechanical Properties</b>                                  |             |                         |        |
| Izod Notched Impact Strength, 23 °C (73 °F)                   | ASTM D 256  | kJ/m <sup>2</sup>       | 53     |
| Tensile Stress at Yield, 23 °C                                | ISO 527     | MPa                     | 59     |
| Tensile Strain at Break, 23 °C                                | ISO 527     | %                       | 3      |
| Tensile Modulus, 0° fiber direction, 23°C                     | ISO 527-4   | GPa                     | 3300   |
| Tensile Creep Modulus (1000h)                                 | ISO 899     | MPa                     | 2600   |
| Tensile Creep Modulus (1h)                                    | ISO 899     | MPa                     | 3300   |
| Flexural Strength, 23 °C                                      | ISO 178     | MPa                     | 160    |
| Flexural Modulus, 23 °C                                       | ISO 178     | MPa                     | 2280   |
| Hardness, Ball Indentation                                    | ISO 2039-1  | MPa                     | 150    |
| <b>Thermal Properties</b>                                     |             |                         |        |
| Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)           | ISO 306     | °C                      | 101    |
| Vicat Softening Temperature, B/1 ( 120 °C/h, 10N)             | ASTM D 1525 | °C                      | 108    |
| Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)  | ISO 75      | °C                      | 86     |
| Heat Deflection Temperature B; (annealed 4 h/80 °C; 0.45 MPa) | ISO 75      | °C                      | 98     |

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| Property, Test Condition                | Standard      | Unit                 | Values            |
|-----------------------------------------|---------------|----------------------|-------------------|
| Coefficient of Linear Thermal Expansion | ISO 11359     | 10 <sup>-6</sup> /°C | 80                |
| Thermal Conductivity                    | ISO 22007-4   | W/(m K)              | 0.17              |
| <b>Electrical Properties</b>            |               |                      |                   |
| Dielectric Constant (100 Hz)            | IEC 62631-2-1 | -                    | 2.5               |
| Dissipation Factor (100 Hz)             | IEC 62631-2-1 | 10 <sup>-4</sup>     | 0.9               |
| Dissipation Factor (1 MHz)              | IEC 62631-2-1 | 10 <sup>-4</sup>     | 0.5               |
| Volume Resistivity                      | IEC 62631-3-1 | Ohm*m                | >10 <sup>16</sup> |
| Surface Resistivity                     | IEC 62631-3-1 | Ohm                  | >10 <sup>14</sup> |
| <b>Optical Properties</b>               |               |                      |                   |
| Refractive Index, Sodium D Line         | ISO 489       | -                    | 1.57              |
| Light Transmission at 550 nm            | ASTM D 1003   | %                    | 89                |
| Haze                                    | ASTM D 1003   | %                    | 2                 |
| <b>Other Properties</b>                 |               |                      |                   |
| Density                                 | ISO 1183      | kg/m <sup>3</sup>    | 1040              |
| <b>Processing</b>                       |               |                      |                   |
| Melt Temperature Range                  | ISO 294       | °C                   | 180 - 280         |
| Mold Temperature Range                  | ISO 294       | °C                   | 40                |
| Injection Velocity                      | ISO 294       | mm/s                 | 200               |

Typical values for uncolored products

Please note that all processing data stated are only indicative and may vary depending on the individual processing complexities.

Please consult our local sales or technical representatives for details.

## SUPPLY FORM

Styrolution® PS ECO 168N BC100 is delivered in the form of cylindrical or spherical pellets, packed in 25 kg bags or bulk.

## PROCESSING

Styrolution® PS ECO 168N BC100 can be injection molded at temperatures between 180 and 280°C, and recommended mold temperatures between 10 and 60 °C. Extrusion temperatures should not exceed 250°C.

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### PRODUCT SAFETY

During processing of Styrolution® PS small quantities of styrene monomer may be released into the atmosphere. At styrene vapour concentrations below 20ppm no negative effects on health are expected. In our experience, the concentration of sty-rene does not exceed 1 ppm in well ventilated workplaces - that is were five to eight air changes per hour are made.

### DISCLAIMER

The above mentioned data are accurate to the best of our knowledge. They are based upon reputable labs and industry standard testing methods. These are only typical values and actual product specification may deviate at industrial range. Therefore, no data in this technical data sheet shall constitute a warranty or representation regarding product features, fitness of the product for a specific purpose or application or its processability. INEOS Styrolution disclaims all liability in connection therewith. The customer himself is required to verify whether or not the product is suitable for the further processing or application intended and whether or not the product complies with the relevant statutory requirements. Unless explicitly and individually otherwise agreed in writing, INEOS Styrolution's sole and exclusive liability with respect to its products is set forth in INEOS Styrolution's General Terms and Conditions for Sale.