

SABIC® PS 155

GENERAL PURPOSE POLYSTYRENE FOR FOAM EXTRUSION

DESCRIPTION

General purpose Polystyrene PS 155 is manufactured by continuous mass polymerization of styrene monomer. It is a crystal-like, hard and brittle polymer with medium flow and good tensile and flexural strength. It has high vicat and heat deflection temperatures.

TYPICAL PROPERTY VALUES

Revision 20220720

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|------------------------------------------------------------------|----------------|-------------------|--------------|
| POLYMER PROPERTIES | | | |
| Melt Flow Rate (MFR) | | | |
| @ 200°C & 5 kg ⁽¹⁾ | 7 | g/10 min | ASTM D1238 |
| Load Density@ 23°C | 1050 | kg/m ³ | ASTM D792 |
| Bulk Density (Method B) | 600 | kg/m ³ | ASTM D1895 |
| MECHANICAL PROPERTIES | | | |
| Tensile Strength | 45 | MPa | ASTM D638 |
| Tensile Elongation | 2 | % | ASTM D638 |
| Tensile modulus | 2990 | MPa | ASTM D638 |
| Flexural Strength | 66 | MPa | ASTM D790 |
| Flexural Modulus | 3627 | MPa | ASTM D790 |
| Izod impact notched at 23 °C | 16 | J/m | ASTM D256A |
| Rockwell Hardness | | | |
| L-Scale ⁽²⁾ | 93 | - | ASTM D785 |
| M-Scale | 60 | - | ASTM D785 |
| THERMAL PROPERTIES | | | |
| Vicat Softening Point, (Rate A/50°C) | 102 | °C | ASTM D1525 |
| Heat Deflection Temperature (Method B, 455 KPa, Annealed) | 100 | °C | ASTM D648 |
| Flammability Rating, UL 94 | | | |
| @ 1.3 mm and 3 mm (natural color) ⁽¹⁾ | MB | Rate | - |

(1) Typical values; not to be construed as specification limits.

(2) Based on Injection molded specimens.

APPLICATIONS

It is recommended for extrusion purposes. It can be used for foam extrusion application such as building insulation.

PROCESSING CONDITIONS

Typical temperature (°C) profile for PS 155:

Throat Ambient, Feed 185°C, Transition 200°C, Metering 220°C and Die 230°C

FOOD REGULATION

PS 155 is suitable for Food contact application. Detailed information is provided in relevant Material Safety Datasheet and for additional specific information please contact SABIC local representative for certificate.

STORAGE AND HANDLING

Polystyrene resin should be stored to prevent a direct exposure to sunlight and/or heat. The storage area should also be dry and preferably don't exceed 50°C. SABIC would not give warranty to bad storage conditions which may lead to quality deterioration such as color change, bad smell and inadequate product performance. It is advisable to process PS resin within 6 months after delivery.

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