

SABIC® PS 125

GENERAL PURPOSE POLYSTYRENE FOR INJECTION MOLDING

DESCRIPTION

125 is general purpose Polystyrene manufactured by continuous mass polymerization of styrene monomer. It is a crystal-like, hard and brittle polymer with medium flow and high clarity. It also has medium vicat and heat deflection temperatures and makes it suitable for various applications.

TYPICAL APPLICATIONS

PS 125 is recommended for packaging items, namely jewelry and gift boxes; medical supplies such as Petri dishes, test tubes holders and specimen jars. It can also be used in capping the high impact polystyrene coextruded sheet for higher surface gloss and can be blended with impact modifier resin for clear packaging articles.

TYPICAL PROPERTY VALUES

Revision 20240731

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|--|----------------|-------------------|--------------|
| POLYMER PROPERTIES | | | |
| Melt Flow Rate (MFR) | | | |
| 200°C/ 5.0 kg | 9 | 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 | 43 | MPa | ASTM D638 |
| Tensile Elongation | 2 | % | ASTM D638 |
| Tensile modulus | 2598 | MPa | ASTM D638 |
| Flexural Strength | 82 | MPa | ASTM D790 |
| Flexural Modulus | 3529 | MPa | ASTM D790 |
| Izod impact notched at 23 °C | 12 | J/m | ASTM D256A |
| Rockwell Hardness, L-Scale | 95 | - | ASTM D785 |
| M-Scale ⁽¹⁾ | 63 | - | ASTM D785 |
| THERMAL PROPERTIES | | | |
| Flammability Rating, UL 94 | | | |
| @ 1.3 mm and 3 mm (natural color) | HB | Class | - |
| Vicat Softening Point, (Rate A/50°C) | 98 | °C | ASTM D1525 |
| Heat Deflection Temperature (Method B, 455 KPa, Annealed) | 93 | °C | ASTM D648 |

(1) Based on Injection molded specimens.

PROCESSING CONDITIONS

Typical barrel temperature (°C) profile for injection grade PS 125: 170-220, Die temperature (°C): 215

STORAGE AND HANDLING

PS 125 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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