



# PS 125

General Purpose Polystyrene for Injection Molding

## Product Description

General purpose Polystyrene PS 125 is 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

It 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 data

| Properties  | Unit              | Value <sup>(1)</sup> | ASTM Method |
|---|-------------------|----------------------|-------------|
| <b>Resin Properties</b>   |                   |                      |             |
| Melt Flow Rate @ 200°C & 5 kg load                              | g/10 min.         | 7.0                  | D-1238      |
| Density @ 23°C  | kg/m <sup>3</sup> | 1050                 | D-792       |
| Bulk Density (Method B)   | kg/m <sup>3</sup> | 600                  | D-1895      |
| <b>Mechanical Properties <sup>(2)</sup></b>                     |                   |                      |             |
| Tensile Strength  | MPa               | 43                   | D-638       |
| Tensile Elongation  | %                 | 2                    | D-638       |
| Tensile Modulus   | MPa               | 2598                 | D-638       |
| Flexural Strength   | MPa               | 82                   | D-790       |
| Flexural Modulus  | MPa               | 3529                 | D-790       |
| Izod Impact Notched @ 23°C                                      | J/m               | 12                   | D-256       |
| Rockwell Hardness, L-Scale                                      |                   | 95                   |             |
| M-Scale   | -                 | 63                   | D-785       |
| <b>Thermal Properties <sup>(2)</sup></b>                        |                   |                      |             |
| Vicat Softening Point<br>(Rate A, 1 Kg/50°C)                    | °C                | 95                   | D-1525      |
| Heat Deflection Temperature<br>(Method B, 455 KPa, Annealed)    | °C                | 90                   | D-648       |
| Flammability Rating, UL 94<br>@ 1.3 mm and 3 mm (natural color) | Class             | HB                   | -           |

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

(2) Based on injection molded specimens.

## Processing Conditions

Typical temperature (°C) profile for injection grade PS 125:

| Throat  | Feed | Transition | Metering | Die |
|---------|------|------------|----------|-----|
| Ambient | 170  | 195        | 220      | 215 |

## **Food Regulation**

PS 125 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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Saudi Basic Industries Corporation, P.O.Box 5101, Riyadh 11422, Kingdom of Saudi Arabia  
Tel: 966 1 2258000  
Fax: 966 1 2259000

Technical Marketing  
Tel: 966 1 2659166  
Fax: 966 1 2653544  
Toll-free 800 1245577

PS Sales:  
Fax: 966 1 2258751  
Website: [www.sabic.com](http://www.sabic.com)

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