


**TotalEnergies**

Refining & Chemicals  
Polymers

## Polystyrene Crystal 1340

Technical data sheet  
High Molecular Weight Crystal Polystyrene  
Produced in Europe

### Description

POLYSTYRENE CRYSTAL 1340 is a high molecular weight crystal polystyrene which allows maximum dilution rates with high impact polystyrene grades such as POLYSTYRENE IMPACT 7240. In dilution, POLYSTYRENE CRYSTAL 1340 gives excellent processing in both extrusion and thermoforming with good finished product dimensional stability and mechanical properties.

POLYSTYRENE CRYSTAL 1340 can be used in injection.

Main applications are cups and other products by in line extrusion / thermoforming, foamed trays by direct gassing (in line thermoforming), dairy sheets, CD boxes, toys, office equipment, eggs boxes.

### Characteristics

|                                                  | Method      | Unit              | Value    |
|--------------------------------------------------|-------------|-------------------|----------|
| <b>Rheological properties</b>                    |             |                   |          |
| Melt flow index (200°C-5kg)                      | ISO 1133 H  | g/10mn            | 4        |
| <b>Thermal properties</b>                        |             |                   |          |
| Vicat softening point 10N (T° increase = 50°C/h) | ISO 306A50  | °C                | 98       |
| Vicat softening point 50N (T° increase = 50°C/h) | ISO 306B50  | °C                | 93       |
| HDT unannealed under 1.8 MPa                     | ISO 75-2A   | °C                | 75       |
| HDT annealed under 1.8 MPa                       | ISO 75-2A   | °C                | 88       |
| Coefficient of linear thermal expansion          |             | mm/°C             | 7.10 E-5 |
| <b>Mechanical properties</b>                     |             |                   |          |
| Unnotched Charpy impact strength                 | ISO 179/1eA | KJ/m <sup>2</sup> | 8        |
| Tensile strength at break                        | ISO 527-2   | MPa               | 44       |
| Elongation at break                              | ISO 527-2   | %                 | 2.5      |
| Tensile modulus                                  | ISO 527-2   | MPa               | 3100     |
| Flexural modulus                                 | ISO 178     | MPa               | 2900     |
| Rockwell hardness                                | ISO 2039-2  |                   | L 70     |
| <b>Electrical properties</b>                     |             |                   |          |
| Dielectric strength                              |             | kV/mm             | 135      |
| Surface resistivity                              | ISO IEC 93  | Ohms              | >10 E+14 |
| <b>Miscellaneous</b>                             |             |                   |          |
| Density                                          | ISO 1183    | g/cm <sup>3</sup> | 1.05     |
| Moulding shrinkage                               |             | %                 | 0.4-0.7  |
| Water absorption                                 | ISO 62      | %                 | <0.1     |

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### General Information

- Standard properties: All tests carried out at 23°C unless otherwise stated. Mechanical properties are measured on injection moulded tests specimens.
- Bulk density: bulk density is approximately 0.6 g/cm<sup>3</sup>.

### Handling and storage

Please refer to the safety data sheet (SDS) for handling and storage information. It is advisable to convert the product within one year after delivery provided storage conditions are used as given in the SDS of our product. SDS may be obtained from the website: [www.polymers.totalenergies.com](http://www.polymers.totalenergies.com).

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