# POLYSTYRENE CRYSTAL 1540

Technical Data Sheet
Easy Flow crystal Polystyrene
Manufactured in Europe

## Description

POLYSTYRENE CRYSTAL 1540 is an easy flowing crystal polystyrene designed for extrusion or injection applications. In extrusion, it allows to increase extruder output and thermoforming cycle times when mixed with a high impact polystyrene such as POLYSTYRENE IMPACT 7240. Having high gloss, it is particularly suitable for glossy-layer co-extrusion. In injection moulding, POLYSTYRENE CRYSTAL 1540 with this low viscosity at high shear rate has a good injectability and combines an excellent fluidity with a higher softening point.

## Applications

Dairy sheet, cups (dilution with impact polystyrene)

Injection: Boxes, office equipment - e.g. filing trays, CD boxes, pen bodies, internal fridge parts, toys, cups.

## Properties

| Rheological | Method | Unit | Value |
|---|---|---|---|
| Melt flow index (200°C-5kg) | ISO 1133 H | g/10mn | 12 |
| **Thermal** | | | |
| Vicat softening point 10N (T° increase = 50°C/h) | ISO 306A50 | °C | 91 |
| Vicat softening point 50N (T° increase = 50°C/h) | ISO 306B50 | °C | 86 |
| HDT unannealed under 1.8 MPa | ISO 75-2A | °C | 73 |
| HDT annealed under 1.8 MPa | ISO 75-2A | °C | 83 |
| Coefficient of linear thermal expansion | | mm/°C | 7.10 E-5 |
| **Mechanical** | | | |
| Unnotched Charpy impact strength | ISO 179/1eA | KJ/m² | 8 |
| Tensile strength at break | ISO 527-2 | MPa | 42 |
| Elongation at break | ISO 527-2 | % | 2 |
| Tensile modulus | ISO 527-2 | MPa | 3100 |
| Flexural modulus | ISO 178 | MPa | 2900 |
| Rockwell hardness | ISO 2039-2 | | L 70 |
| **Electrical** | | | |
| Dielectric strength | | kV/mm | 135 |
| Surface resistivity | ISO IEC 93 | Ohms | >10 E+14 |
| **Miscellaneous** | | | |
| Density | ISO 1183 | g/cm³ | 1.05 |
| Moulding shrinkage | | % | 0.4-0.7 |
| Water absorption | ISO 62 | % | <0.1 |

## 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/cm3.
- Please refer to the Safety Data Sheet for further information.
- Please refer to the safety data sheet (SDS) for handling and storage information. It is advisable to convert the product within six months after delivery provided storage conditions are used as given in the SDS of our product. SDS may be obtained from the website: www.totalrefiningchemicals.com



TOTAL RESEARCH & TECHNOLOGY FELUY
Zone Industrielle C
B-7181 Feluy
Belgium