

POLYSTYRENE CRYSTAL

1810

Technical data sheet
Very Easy Flowing Polystyrene

Description >>

POLYSTYRENE CRYSTAL 1810 is a very easy flowing crystal polystyrene designed for the injection moulding industry. The excellent processing characteristics of this grade allows for the production of articles which are very thin and/or have complex flow patterns. In extrusion, POLYSTYRENE CRYSTAL 1810 is used as a high gloss capping layer in co-extrusion.

Applications >>

- Transparent boxes, office equipment - tape dispensers, pen bodies
- Internal parts for refrigerators, toys and games

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 of all natural grades is approximately 0.6 g/cm³
- POLYSTYRENE CRYSTAL 1810 should be kept in cool and dry place. Avoid direct exposure to sunlight.

Food contact : the composition of POLYSTYRENE CRYSTAL 1810 conforms with present regulations in the various European countries, as well as the USA for packaging destined for use in contact with foodstuffs. It remains the responsibility of the user to verify that the finished product also conforms with these regulations.

Please contact our technical office for more details.



Properties : >>

Rheological >>

| Property | Method | Unit | Value |
|-----------------------------|------------|--------|-------|
| Melt flow index (200°C-5kg) | ISO 1133 H | g/10mn | 20 |

Thermal >>

| Property | Method | Unit | Value |
|--|------------|-------|----------|
| Vicat softening point 10N (T° increase = 50°C/h) | ISO 306A50 | °C | 90 |
| Vicat softening point 50N (T° increase = 50°C/h) | ISO 306B50 | °C | 85 |
| HDT unannealed under 1.8 MPa | ISO 75-2A | °C | 72 |
| HDT annealed under 1.8 MPa | ISO 75-2A | °C | 81 |
| Coefficient of linear thermal expansion | | mm/°C | 7,10 E-5 |

Mechanical >>

| Property | Method | Unit | Value |
|----------------------------------|-------------|-------------------|-------|
| Unnotched Charpy impact strength | ISO 179/1eU | kJ/m ² | 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 >>

| Property | Method | Unit | Value |
|---------------------|------------|-------|-----------|
| Dielectric strength | | kV/mm | 135 |
| Surface resistivity | ISO IEC 93 | Ohms | > 10 E+14 |

Miscellaneous >>

| Property | Method | Unit | Value |
|--------------------|----------|-------------------|---------|
| Density | ISO 1183 | g/cm ³ | 1.05 |
| Moulding shrinkage | | % | 0.4-0.7 |
| Water absorption | ISO 62 | % | < 0.1 |

DISCLAIMER

Information contained in this publication is true and accurate at the time of publication and to the best of our knowledge. The nominal values stated herein are obtained using laboratory test specimens. Before using one of the products mentioned herein, customers and other users should take all care in determining the suitability of such product for the intended use, and particularly the conformity with current regulations. TOTAL PETROCHEMICALS do not recommend its polystyrene resins for use in any application in direct or indirect contact with human body fluids and tissues. The Companies within TOTAL PETROCHEMICALS do not accept any liability whatsoever arising from the use of this information or the use, application or processing of any product described herein. No information contained in this publication can be considered as a suggestion to infringe patents. The Companies disclaim any liability that may be claimed for infringement or alleged infringement of patents.



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