

TOTAL PETROCHEMICALS

POLYSTYRENE CRYSTAL

1540

Technical data sheet
Easy Flow Crystal Polystyrene

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 possesses low viscosity at high shear rate. It does combine excellent fluidity with a higher softening point than POLYSTYRENE CRYSTAL 1810.

Applications >>

- Dairy sheet, cups (dilution with impact polystyrene)
- Injection: Boxes, office equipment - e.g. filing trays, CD boxes, pen bodies internal fridge parts, "glasses"

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 1540 should be kept in cool and dry place. Avoid direct exposure to sunlight.

Food contact : the composition of POLYSTYRENE CRYSTAL 1540 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	12

Thermal >>

Property	Method	Unit	Value
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 >>

Property	Method	Unit	Value
Unnotched Charpy impact strength	ISO 179/1eU	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 >>

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/cm³	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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Last updated: 11/10/2004
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