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Refining & Chemicals
Polymers

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Polystyrene Crystal 1810

Technical data sheet
Very easy flow Crystal Polystyrene
Produced in Europe

Description

POLYSTYRENE CRYSTAL 1810 is a very easy flowing crystal polystyrene designed for the injection moulding industry. The excellent processing characteristics of this grade allow 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.

The main applications are transparent boxes, office equipment - tape dispensers, pen bodies, masterbatches, capping layer for various articles, internal parts for refrigerators, toys and games.

Characteristics

	Method	Unit	Value
Rheological properties			
Melt flow index (200°C-5kg)	ISO 1133 H	g/10mn	20
Thermal properties			
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 properties			
Unnotched Charpy impact strength	ISO 179/1eA	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 properties			
Dielectric strength		kV/mm	135
Surface resistivity	ISO IEC 93	Ohms	>10 E+14
Miscellaneous			
Density	ISO 1183	g/cm ³	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.