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Polystyrene Crystal 1340

TotalEnergies

Refining & Chemicals
Polymers

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
Rheological properties			
Melt flow index (200°C-5kg)	ISO 1133 H	g/10mn	4
Thermal properties			
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
Mechanical properties			
Unnotched Charpy impact strength	ISO 179/1eA	KJ/m²	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
Electrical properties			
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.

Polystyrene