

HIGH IMPACT POLYSTYRENE (Hips) Sheet Properties

A range of co-extruded film and sheet products which combine the toughness of a High Impact Polystyrene (HIPS) substrate with a high gloss capping layer of crystal polystyrene (crystal PS) polymer.

Key Features:

- Higher Impact Strength
- High Gloss
- Smooth Surface
- Lightweight
- Suitable for Thermoforming, Fabrication and Printing
- Good Combination of Toughness and Rigidity

Applications:

- Vacuum Formed Parts
- Interior Decorations and Wall Cladding
- Point of Sale Displays
- Insert Packaging
- Sanitary Ware (bath panels, shower walls)
- Screen Printing

TECHNICAL INFORMATION⁽¹⁾			
Mechanical Properties	Test Method	Unit	HIPS
Density ⁽²⁾	ISO 1183/B	g/cm ³	1.05
Tensile Strength (base / capping layer)	ISO 527-2/50	MPa	24 / -
Tensile Modulus (base / Capping layer)	ISO 527-2	MPa	1850 / 3100
Flexural Strength (base / capping layer)	ISO 178	MPa	40 / 75
Charpy Impact Strength (notched @ 23°C) (base / capping layer)	ISO 179 / 1eA	kJ/m ²	11 / -
Falling Dart Impact Strength ⁽³⁾ (base / capping layer)	ISO 6603 / 1	Joules	46 / -
Thermal Properties			
Temp. of Deflection under Load, HDT (base / capping layer)	ISO 75-2 / A	°C	83 / 75
Vicat Softening Point (base / capping layer)	ISO 306 / B50	°C	88 / 85
Other Properties			
Flammability @ 1.6mm	UL94	Class	HB
"A" Surface Gloss (60° angle - smooth surface) ⁽⁴⁾	ISO 2813	Gloss Units	> 85

(1) Property evaluations based on injection moulded unpigmented samples unless otherwise stated

(2) Density values vary with pigmentation

(3) 4.0mm extruded pigmentation sheet

(4) All gloss readings are based on thermoformed parts - gloss levels may vary this dependent on sheet gauge

STANDARD TOLERANCES	
Film / Sheet Thickness (mm)	1.0 to 2.0
Gauge	+/- 8%
Width	+/- 1.5mm
Length	+/- 3.0mm

These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee as conditions and methods of use are beyond our control. We recommend that the prospective user determine the suitability of our materials and suggestions before adopting them on a commercial scale.