



MULFORD
PLASTICS
delivering solutions

HIGH IMPACT POLYSTYRENE

High Impact Polystyrene

HIPS or High Impact Polystyrene sheet is obtained by blending standard styrene with impact-improving additives. Due to the combination of versatility, easy processing and good value polystyrene is one of the largest volume thermoforming plastics. The surface allows for good ink adhesion with the end product rich in looking, durable and functional. It is available in opaque white and black sheet and is most often used in applications of temporary or disposable nature.

Key Features

- Excellent thermoforming characteristics
- Good impact strength
- FDA approved - food safe
- Excellent printability
- High degree of hardness
- Low moisture resistance
- Die cuttable

Product Applications

- Point of sale display
- Promotional items
- Packaging & appliances containers
- Tags and labels
- Indoor signage

HIGH IMPACT POLYSTYRENE

TECHNICAL DATA SHEET

PROPERTY	ASTM METHOD	UNIT	VALUE
GENERAL Specific Gravity Water Absorption Light Transmission Dielectric Strength	D-792 D-570 D-1003 D-149	g/cm ³ % @ 24 hrs % Volts/Mil	1.07 0.1 N.A 300-600
MECHANICAL Notched Izod Impact Tensile Strength Flexural Strength Hardness Rockwell	D-256 D-638 D-790 D-785	J/m MPa MPa M or R	4 - 27 24 - 45 76 - 90 M35 - M70
THERMAL Cont. Working Temp. Vacforming Temp. Thermal Expansion	D-696	°C °C 10 ⁻⁵ /°C	60 - 70° 110 - 180° 3 - 4

FABRICATION

Sawing, Cutting, Drilling & Guillotining: A circular saw blade with carbide teeth utilising the triple chip tooth design is preferred for thicker gauges. Typical laser cutting and router methods are also very successful. For drilling, use conventional drill bits with the standard drill angles and a negative rake. Other suitable methods for cutting Styrene sheet include: shearing, blanking and punching. Shears produce straight-edged cuts, while blanking dies and punches can produce a wide variety of shapes. Appropriate clearance angles are required.

Forming: High impact polystyrene can be thermoformed using typical strip heating and vacuum forming equipment. No predrying of the material is required.

Decorating: High impact polystyrene can be screen printed using inks specifically formulated for HIPS. Vinyl graphics can also be applied using typical application methods.

Cementing: High impact polystyrene can be successfully bonded using Weldon 40 & 4052.

This specification provides typical data to the best of our knowledge at the time of publishing. Due to our inability to control conditions of use and application, we are unable to make any recommendations or suggestions. Mulford International nor any of their suppliers assume any liability for use of information presented.

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