High Impact Polystyrene

HIPS, Styrene, ethenylbenzene,
vinyl benzene, phenylethene

Description and Overview

High impact polystyrene (HIPS) meets a wide variety of applications and is one of the most versatile and inexpensive materials available today. It can be drilled, threaded, sawed, sheared, punched and machined. Styrene can also be painted and has excellent forming properties. HIPS can be thermoformed in standard thermoforming ovens.

Due to the amorphous properties of HIPS, it is typically one of the easier polymer sheet materials to form. Its maximum heat resistance is 180°F and the forming temperature is 300°F to 350°F.

Styrene is also known by the brand names Prime Impax®, DigiMax®, LithoMax®, and ScreenMax®.

Full sheet: 48” x 96” (0.20” through 0.125” thick)

Applications and Uses

High impact polystyrene is used for models, prototypes, signs, displays, enclosures, and thousands of everyday products for home, school, work and play.

- Printing: signs, ID cards, name tags, dials/decals, Point-of-Purchase applications
- Forming: Medical packaging, food trays & containers, model making, industrial packaging, lids
- Prototypes
- Displays
- Enclosures
- Building insulation
- Automotive applications
- Marine applications

Properties and Specifications

Property	HIPS
Specific Gravity	1.04
Tensile Strength (psi)	3,000-5,000
Flexural Strength (psi)	6,400-7,000
Izod Impact Strength (ft-lbs/in.)	2
Flash Point @ 1013hPA	88°F
Heat Deflection Temperature	185°F
Forming Temperature	300 to 350°F
Autoignition temperature (1013mPA)	914°F
Explosion limits	Lower: ~ 1 vol% Upper: ~6.1 vol%
Affixable Properties	Chem / Mech

Properties are typical.
Chem is an abbreviation for chemically affixed with glues, chemicals, or adhesive.
Mech is an abbreviation for mechanically affixed bonding.
Field testing is recommended for any application.

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⚠ WARNING: This product can expose you to chemicals including Styrene, CAS 100-42-5, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov

⚠ WARNING: This product can expose you to chemicals including Styrene, CAS 100-42-5, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

INTERSTATE ADVANCED MATERIALS