

## TECHNICAL DATA

# POLYSTYRENE HIGH IMPACT (HIPS)

Plastic high impact polystyrene (HIPS) sheets which have excellent transparency, light weight, and are easy to handle and stick. They can be cut, milled and molded easily to be used in multiple applications.

## ADVANTAGES POLYSTYRENE HIGH IMPACT (HIPS)

- Lightweight.
- It can be processed in a wide range of temperatures.
- High tension force.
- Resistant to inorganic chemicals and water.
- Outstanding electrical properties.
- Impermeability.
- Thermal resistance.

## TYPES AND FORMATS

High impact polystyrene sheets are available in stock in black and white colors for thicknesses of 2 and 3 mm. For other specific colors and textures there is a minimum quantity purchase. It can be supplied with special quality ESCR (Environmental Stress Crack Resistance) for use in refrigerated interiors.

## APPLICATION AREAS

- Containers.
- Interior partitions.
- Decoration in stores and merchandising elements.
- Food packaging.
- Transparent containers.
- Fridge Interiors.
- Suitcases.
- Automotive parts.

## TECHNICAL SPECIFICATIONS – POLYSTYRENE HIGH IMPACT (HIPS)

Properties	Value	Units	Standard
<b>Physical properties</b>			
Density	1,05	g/cm <sup>3</sup>	ISO 1183
<b>Mechanical properties</b>			
Resistance at break	59	MPa	ISO 527
Traction elasticity module	3250	MPa	ISO 527
Elongation at break	3%	%	ISO 527
Resistance to traction up to deformation	(*)	MPa	ISO 527
Flexural strength	106	MPa	ISO 178
Impact strength with cut Charpy method	1,47	KJ/m <sup>2</sup>	ISO 179
Impact strength Charpy method	16	KJ/m <sup>2</sup>	ISO 179
Flexural ball pressure strength	150	MPa	ISO 2039
<b>Thermal properties</b>			
Maximum temperature in continuous use.	80	°C	
VICAT softening temperature (10 N)	106	°C	ISO 306
VICAT softening temperature (50 N)	101	°C	ISO 306
HDT A softening temperature (1,8 Mpa)	86	°C	ISO 75-2
HDT B softening temperature (0,45 Mpa)	98	°C	ISO 75-2
Linear thermal expansion coefficient	8x10 <sup>-5</sup>	°C <sup>-1</sup>	ISO 75-2
<b>Optical properties</b>			
Light transmission	89	%	ASTM D-1003
Refraction	1591	-	ASTM D-54

The properties described here are typical values of the material. Polimer Tecnic is not responsible for the materials of a specific consignment to exactly match the given values, being able to carry out tests of that heading. The above information is based on our experience and is given in good faith. Due to some installation and processing factors that are beyond our knowledge and control, no guarantee is given regarding such information.