



HIPS SHEETS DATA SHEET

PROPERTIES

- Low cost
- High impact strength even in low temperatures
- Outstanding thermoforming characteristics for deep drawn forming
- Higher chemical resistance
- Good machinability
- Easy to paint or print on
- Easy to assemble with adhesives or solvents
- Available in a wide variety of colors

Unmatched quality

World's leading refrigerator manufacturers confirm our quality. Our top quality HIPS sheets are not only demanded by their plants in Turkey but also by the plants overseas.

Işık is not only a sheet producer. Our R&D team working in close cooperation with factories' production departments, offers the solutions they need. Our extensive material and processing knowledge ensures to meet our customers' demanding specifications and provide a trouble free run in the assembly lines.

For refrigerator inner liner production, we only use selected ESCR (Environmental Stress Crack Resistance) material, designed specifically for large appliance extrusion/thermoforming applications. This advanced polystyrene resin allows production of thinner refrigerator liners with more homogeneous thickness distribution and improved environmental stress crack resistance compared with conventional high-impact polystyrene (HIPS) resins. In addition, ESCR resins enable significant cost reductions via processing and productivity advantages, and increased rigidity with reduced scrap levels.

İŞİK PLASTİK delivers over 3000 tons of HIPS annually to the world's leading refrigerator manufacturers.

Go Cheap, Go HIPS

HIPS (high-impact polystyrene) is the most versatile plastic sheet to guarantee trouble-free processing, giving flexibility of forming, offering enhanced impact resistance as well as enormous cost efficiency.

It is preferred material for vacuum formers and screen printers who need to turn out high quality work on limited budgets. HIPS finds its way in a wide variety of applications, from bathroom cabinet door lamination to bath tub and shower trays front panels, from point of sale displays to car roof cargo boxes and to furniture parts.

Just name it

Our product development team is ready to listen your needs and to offer the solutions you need:

- Multilayer production options
- Anti-bacterial surface treatment
- Matt- gloss finishes
- Corona treatment
- UV treatment
- Custom colours
- Desired degree of impact strength
- and many more...

White goods

Refrigerators and freezers have become more complex in their internal design resulting in the need of complex shapes, deep draws and sharp corners. Our high impact polystyrene (HIPS) sheets are manufactured with enhanced ESCR (Environmental Stress Crack Resistance) resins to meet manufacturers demanding needs. With their superior mechanical performance our sheets provide high impact strength, good elongation and heat distortion properties as well as improved chemical resistance, especially against PU foam.

Thickness: 0.5mm – 6mm / .02" - .236"

Width: Up to 1500mm / 59"

Sizes&Colors: Customer specific

Furniture

To complete their designs, furniture industry need thermoformable, paintable, impact and chemical resistant and yet economically reasonable materials. High impact polystyrene sheets fill in the gap. Our custom coloured sheets can be ordered cut-to-size to customer specifications.

Thickness: 0.5mm – 6mm / .02" - .236"

Width: Up to 1500mm / 59"

Sizes&Colors: Customer specific

Automotive

High impact grades of PS find a wide range of use in automotive industry because of their superior characteristics:

- Roof and ski boxes with high demands in respect of colour fastness
- Heavy goods vehicle parts, such as spoilers, coverings, pick-ups
- Parts of agricultural machines (tractor roofs, motor coverings, mud-guards)

Thickness: 2mm – 6mm / .075" - .236"

Width: Up to 1500mm / 59"

Sizes&Colors: Customer specific

HIGH IMPACT POLYSTYRENE SHEET

<u>Physical Properties</u>	<u>Standart (ISO)</u>	<u>Unit</u>	<u>Value</u>
Density	1183	g/cm ³	1,05
Melt Flow Rate	1133	g/10 min.	2,8
<u>Mechanical Properties</u>			
Impact Strength Izod (23°C)	180 / 1A	kJ/m ²	10,8
Impact Strength Izod (20°C)	180 / 1A	kJ/m ²	8,2
Impact Strength Charpy (23°C)	179 / 1A	kJ/m ²	10,6
<u>Tensile Properties</u>			
Strength at Yield	527	MPa	16
Strength at Rupture	527	MPa	24
Elongation at Rupture	527	%	60
Tensile Modulus (1 mm/ min)	527	MPa	1650
<u>Flextural Properties</u>			
Flextural Strength (3-point)	178	MPa	38
Flextural Modulus (3-point)	178	MPa	1650
<u>Thermal Properties</u>			
Vicat Softening Temperature 1 kg / 120 ° C	306 A	°C	100
Vicat Softening Temperature 5 kg / 120 ° C	306 B	°C	89
<u>Heat Deflaction Temperature</u>			
1,82 MPa / 120°C/h unaneated	75A	°C	68
0,45 MPa / 120°C/h unaneated	75B	°C	80

