

# EXTRUDED POLYSTYRENE (PS) SOLID SHEETS



## General information

Economical and easy to process. Mostly for indoor applications.

**Grades** - Transparent General Purpose Polystyrene Sheets (GPPS), non-transparent High Impact Polystyrene sheets (HIPS)

**Finishing** - matt/matt, one side gloss, second side mat/both side gloss.

## Thickness

Typical Properties	Method	Units	HIPS sheet
<b>General</b>			
Density	ISO 1183	g/cm <sup>3</sup>	1.05
Flammability	UL94 HB		
<b>Mechanical</b>			
Flexural Strength	ISO 178	MPa	80
Flexural Modulus	ISO 178	MPa	3300
Tensile Strength	ISO 527-2	MPa	55
Elongation at break	ISO 527-2	%	3
Rockwell Hardness	M scale		105
Impact Resistance (Izod notched)	ISO 180/1A	kJ/m <sup>2</sup>	1.5
<b>Optical</b>			
Refractive Index	ISO 489		1.59
Light Transmission (3 mm transparent sheet)	ASTM D1003	%	90
<b>Thermal</b>			
Vicat Softening Temp.(50N)	ISO 306	°C	89

## Main advantages

- Lightweight, lower density than PMMA and PC (Density 1.05 g/m<sup>3</sup>)
- High impact grades (HIPS) are with good impact strength
- High impact grades (HIPS) can not by transparent
- Excellent transparency
- High gloss, brilliant clear
- Hard and stiff
- Fully recyclable
- Economic solution
- UV stabilized, as option
- REACH and RoHS declarations.

## Polystyrene sheets

Mouse-PS Ltd produce clear and coloured polystyrene sheets. Clear sheets with light transmission 89% have excellent transparency for interior glazing usage, lamps and ceiling light fittings. For this application we can provide also clear, opal white and one side embossed sheets.

Low water absorption of polystyrene sheets determine their use as bath or shower cabin doors. For this application we have different sheets with modern designs.

Polystyrene sheets can be produced with or without UV stabilization and with or without masking film.

### Delivery program of HIPS and GPPS sheets:

- ▶ Standard size: 2050 x 1250 mm
- ▶ Maximum Length: 6050 mm
- ▶ Maximum width: 2050 mm
- ▶ Thickness range: 1.00 - 8.90 mm
- ▶ Cut to size: available on request, no minimum quantity
- ▶ Surface texture: gloss/gloss, gloss/matt, matt/matt, embossed/matt

### HIPS benefits:

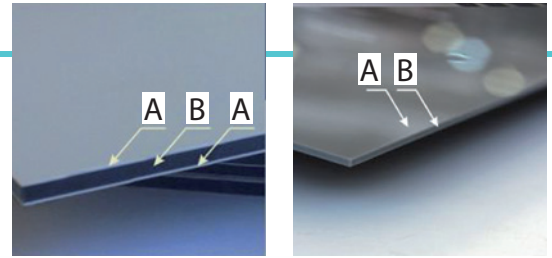
- ▶ Easy for thermoforming
- ▶ High impact strength
- ▶ Good thermal qualities
- ▶ Low water absorbision
- ▶ Easy to recycle
- ▶ Low price
- ▶ Possible food contact approval

### GPPS sheets / Crystal sheets benefits:

- ▶ Good surface hardness and scratch resistance
- ▶ Excellent transparency
- ▶ Good thermal stability
- ▶ Low water absorbision
- ▶ Possible food contact approval
- ▶ Easy to recycle
- ▶ Low price

## Co-extruded HIPS and GPPS Sheets

These sheets can be extruded in 2 layers (AB) or 3 layers (ABA). The co-extrusion of crystal polystyrene GPPS over HIPS core makes the colours to look brighter and nicer. The co-extrusion with virgin material on A layer and recycled material in the middle B layer of the sheet gives our customers sheets with low price, brilliant surface and good opacity.



### Delivery program 2 or 3 layers co-extruded polystyrene sheets:

- ▶ Standard size: 2050 x 1200 mm
- ▶ Maximum Length: 4050 mm
- ▶ Maximum width: 1200 mm
- ▶ Thickness range: 1.00 - 5.00 mm
- ▶ Any RAL colour for upper (A) and lower (A) layers
- ▶ Middle layer (B) - virgin HIPS in ANY RAL colour or 100% recycled HIPS in grey or black

## Diffuser sheets for LED lighting

Our company has the technology and know-how to produce diffuser sheets specialized for the lighting industry. They have brilliant optical properties and surface.

We have the ability to mix with precision different masterbatches and additives to produce sheets with controlled LT and Haze percentage ratio according to the needs of our customers. This lets our clients control the glare of the luminaires UGR (Unifide Glare Rating).

We developed a specialized series of diffusers.

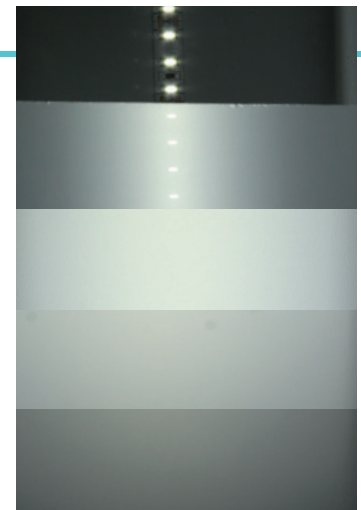
These sheets guarantee equal light distribution over the full surface of the diffuser while the lighting source remains hidden and there are no light spots on the diffuser.

Our technology enables us to control the LT and Haze ratio according to our clients needs for all thicknesses and sizes.

Special thicknesses, sheet sizes and light transmittance are possible.

On request one or both sides of sheet surfaces can be gloss, matt or embossed.

**Cut to size:** Available on request, no minimum quantity.



## Embossed sheets

### Delivery program for designs - 33, 34, 35:

Sheet width: ≤ 2050 mm

Sheet length: 700 mm - 6050 mm

Thickness: 1.5 - 8.0 mm

Polymers: GPPS, HIPS, ABS, SAN, PMMA

Colours: any transparent, translucent opaque - RAL colours on request

Minimum order for sheet size, colour and thickness: 300 kg

Production time: up to 2 weeks

### Delivery program for designs 13, 15, 17, 22, 23, 25, 31, 33, 34, 39, 41:

Sheet width: ≤ 1200 mm

Sheet length: 700 mm - 4050 mm

Thickness: 1.8 - 5.0 mm

Polymers: GPPS, HIPS, ABS, SAN, PMMA

Colours: any transparent, translucent opaque - RAL colours on request

Minimum order for sheet size, colour and thickness: 300 kg

Production time: up to 2 weeks

