

HIPS General Purpose

High-Impact Polystyrene Sheet · Extruded

FOOD CONTACT
FDA

21 CFR 177:1640 · Food-grade

CHARACTERISTICS

- High impact strength and good toughness
- Excellent thermoformability and deep-draw
- Easy to print, decorate, and laminate
- Food-contact compliant — FDA 21 CFR 177:1640
- Wide colour range — Pantone, RAL, NCS matched

APPLICATIONS

- Food packaging — cups, plates, lids, trays
- Disposable goods — cutlery, party tableware
- POS displays & retail signage
- Toy housings, model kits, hobby sheets
- Industrial covers · panels · prototypes

COMPLIANCE UL 94 HB · UL File E185934 · FDA 21 CFR 177:1640 · RoHS · REACH SVHC · ISO 9001:2015

TYPICAL PROPERTIES All values are typical · ASTM test methods · injection-moulded specimens unless noted

PROPERTY	TEST METHOD	VALUE	UNIT
MECHANICAL			
Tensile Strength	ASTM D638	26	MPa
Elongation @ Break	ASTM D638	50	%
Flexural Strength	ASTM D790	42	MPa
Flexural Modulus	ASTM D790	2000	MPa
IMPACT			
Notched Izod @ 23 °C	ASTM D256	100	J/m
Notched Izod @ -23 °C	ASTM D256	On request	
PHYSICAL			
Specific Gravity	ASTM D792	1.03	g/cm³
Melt Flow Index	ASTM D1238	4.5	g/10 min
Mould Shrinkage	ASTM D955	0.4 - 0.7	%
Residual Styrene	SPL/QCA	< 1000 ppm	
FOOD CONTACT			
FDA 21 CFR 177:1640	FDA	Pass	

PROPERTY	TEST METHOD	VALUE	UNIT
THERMAL			
HDT @ 1.86 MPa	ASTM D648	80	°C
Vicat Softening Point	ASTM D1525	102	°C
HDT @ 0.45 MPa	ASTM D648	On request	
FLAMMABILITY			
UL 94 @ 1.6 mm	UL 94	HB	
UL File Reference	UL	E185934	
PROCESSING			
Pre-drying Temperature	—	50 - 80	°C
Pre-drying Time	—	2	hours
Forming Temperature	—	160 - 200	°C
Mould Temperature	—	40 - 60	°C
Maximum Melt Temp.	—	180 - 240	°C

NOTES

Tests on injection-moulded specimens at 23 °C, 50 % RH per ASTM standards. Tensile / Elongation @ 50 mm/min. Flexural and Izod on 3.2 mm specimens. MFI @ 200 °C / 5 kg. Resin sourced from Supreme Petrochem (SH-731E grade family) and other globally certified suppliers. FDA 21 CFR 177:1640 compliant. UL File E185934. RoHS verified by SGS (EU 2015/863). Values are typical, intended as guide only. Final product suitability must be validated under actual application conditions.

PERFORMANCE PROFILE

100 J/m Izod

Notched-impact toughness

FDA 21 CFR 177

Food-contact compliant

102 °C Vicat

Heat softening point

HB UL 94

Standard burn rating @ 1.6 mm

Food-grade thermoforming HIPS — workhorse sheet for cups, plates, and POS.

APPLICATIONS

Where HIPS General Purpose gets specified — FDA food-contact thermoforming sheet for cups, plates, POS displays, toys, and general industrial applications.

FOOD PACK

Cups · Plates · Lids

Food Packaging

Cups, plates, lids, dairy tubs, frozen food trays, ice-cream containers. FDA 21 CFR 177 compliant for direct contact.

DISPOSABLES

Cutlery · Tableware

Disposable Goods

Disposable cutlery, party tableware, single-use lids and containers. Lightweight, food-safe, easily decorated.

POS / SIGNAGE

Retail Displays

POS & Signage

Retail displays, in-store signage, point-of-sale stands. Easy to print, decorate, and thermoform in any colour.

INDUSTRIAL

Toys · Covers · Trim

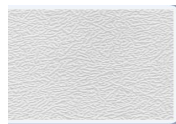
Toys & Industrial

Toy housings, model kits, hobby sheets, industrial covers, panels, prototyping sheet. Excellent deep-draw and formability.

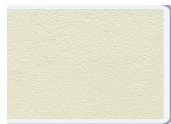
PRODUCTION SPECIFICATIONS

Sheet Thickness	0.3 – 10 mm	Common range 0.5 – 6.0 mm for thermoforming
Sheet Width	up to 2500 mm	XL line capacity
Sheet Length	up to 6 m	Custom cut-to-size on request
Thickness Tolerance	± 5 %	Multi-point validated
Layer Structure	Mono / ABA	Co-extrusion option for skin-core differentiation
Colour Matching	Pantone · RAL · NCS	Spectrophotometer ΔE validation, batch-traced

SURFACE TEXTURES



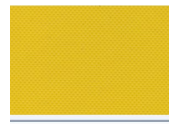
T01
Regular



T02
Fine



T03
Diamond



T04
Fine Diamond



T05
Plain Smooth



T06
FM06

HOW TO READ THESE NUMBERS

Quick reference for what each test actually tells you about how the sheet behaves.

• Tensile Strength

Pulling force before sheet starts to permanently stretch.

• Elongation

How far it stretches before snapping. Higher = more forgiving.

• Flexural Strength

Bending force before fracture. Higher = stronger when flexed.

• Flexural Modulus

Bending stiffness. Higher = more rigid feel when flexed.

• Notched Izod

Impact resistance with stress notch. Survives drops and hits.

• Specific Gravity

Density vs water. 1.03 means just heavier than water.

• MFI

Melt flow index — how easily molten plastic flows. Affects formability.

• HDT / Vicat

Heat at which it sags (HDT) or softens (Vicat). Short-term limits.

• FDA 21 CFR 177

Food contact safety — base resin meets US FDA regulation for food contact applications.

• Mould Shrinkage

How much sheet shrinks during cooling. Lower = tighter dimensional control.

• UL 94 HB

Horizontal burn rating — slow, controlled burn rate. Standard for non-FR HIPS.

• Residual Styrene

Unreacted styrene monomer in resin. Lower = lower migration into food.

STELLAR-EX

Sheet Extrusion Excellence

INDU THERMOFORMERS PVT. LTD. / FORMPACK

Plot No. 6 & 45, Vasai Taluka Co-op Estate, Sector 1, Gaurai Pada, Vasai East, Palghar 401208, India

DOC: TDS-FORMGPHIPS-2026-01 · Rev 01 · Issue date: May 2026 · Page 2 of 2 · Stellar-Ex™ — a brand of Indu Thermoformers
 Values are typical and intended as a guide only. Validate for application. Resin: Supreme Petrochem (SH-731E) and other globally certified suppliers.

ISO 9001 : 2015

Quality Management Certified

GSTIN 27AADCM9861D1ZA

Established 1985