

HDPE General Purpose

High-Density Polyethylene · Thermoforming & Sheet Grade

ESCR — CONDITION B
> 1000 h

ASTM D1693 · F50 · 100% Igepal

CHARACTERISTICS

- Exceptional ESCR — > 1000 h (Condition B)
- Excellent low-temp impact (< -75 °C brittleness)
- High rigidity with good melt strength
- UV-stabilised grade available on request
- NSF 61 potable-water & FDA food-contact

APPLICATIONS

- Thermoformed pallets & dunnage
- Truck bedliners & protective liners
- Playground & outdoor equipment
- Shipping & storage containers
- Fuel & agricultural chemical tanks

COMPLIANCE ASTM D4976 PE 235 · FDA 21 CFR 177.1520 · NSF 61 · UL 94 HB (E349283) · Drug Master File · RoHS · ISO 9001:2015

TYPICAL PROPERTIES

All values are typical · ASTM test methods · compression-moulded specimens unless noted

PROPERTY	TEST METHOD	VALUE	UNIT
MECHANICAL			
Tensile Strength @ Yield	ASTM D638	25	MPa
Elongation @ Break	ASTM D638	700	%
Flexural Modulus	ASTM D790	1200	MPa
Tensile Impact	ASTM D1822	190	kJ/m ²
ESCR			
ESCR (Cond. B, F50)	ASTM D1693	> 1000	h
HARDNESS			
Hardness — Shore D	ASTM D2240	68	—
PHYSICAL			
Density	ASTM D1505	0.948	g/cm ³
Flow Rate (HLM1 21.6 kg)	ASTM D1238	10.0	g/10 min
Water Absorption	ASTM D570	<i>On request</i>	

PROPERTY	TEST METHOD	VALUE	UNIT
THERMAL			
Vicat Softening Temp	ASTM D1525	126	°C
HDT @ 0.46 MPa	ASTM D648	78	°C
Brittleness Temp	ASTM D746	< -75	°C
Low-Temp Service	—	On request	
FLAMMABILITY • UL 94			
Flammability @ 1.6 mm	UL 94	HB	
UL File Reference	UL	E349283	
PROCESSING			
Melt Temperature	—	On request	
Thermoforming Temp	—	On request	

NOTES

Nominal properties are typical of the product and not for specification purposes; values rounded. Determined on compression-moulded specimens prepared per ASTM D4703 Procedure C. Tensile/elongation on Type IV bar at 2 in/min; flexural modulus tangent, 16:1 span:depth; ESCR Condition B (100% Igepal), F50; flow rate HLM1 at 190 °C / 21.6 kg. Meets ASTM D4976 PE 235, FDA 21 CFR 177.1520(c), NSF Standard 61 (potable water) and UL 94 HB (UL file E349283); listed in the FDA Drug Master File. A UV-stabilised grade for outdoor / long-term sunlight exposure is available on request. Resin sourced from globally-certified suppliers including Chevron Phillips Chemical (Marlex grade family). Values are typical, intended as guide only. Final product suitability must be validated under actual application conditions. Water absorption and processing parameters available on request.

PERFORMANCE PROFILE

> 1000 h ESCR

Condition B, 100% Igepal

-75 °C

Low-temp brittleness

NSF 61

Potable-water + FDA safe

0.948 g/cm³

High-density polyethylene

Tough, UV-ready HDPE — engineered for thermoforming, lining and outdoor use.

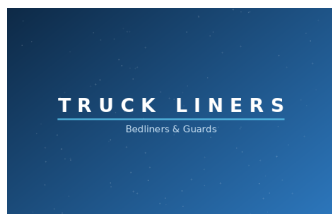
APPLICATIONS

Where HDPE General Purpose gets specified — tough, chemical-resistant sheet for forming, lining and outdoor use.



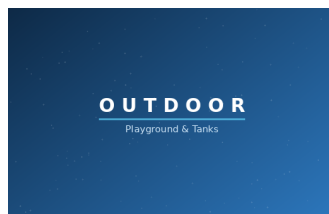
Thermoformed Pallets

Heavy-duty pallets, dunnage and formed parts. High melt strength, deep-draw capable.



Truck Bedliners

Truck bedliners and protective liners. Impact-tough, abrasion- and chemical-resistant.



Outdoor Equipment

Playground panels and outdoor structures. UV-stabilised grade for sunlight exposure.



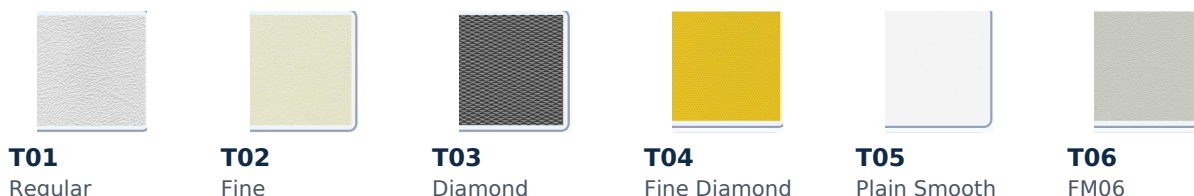
Containers & Tanks

Shipping, storage, fuel and agricultural chemical tanks. Exceptional ESCR, food-safe.

PRODUCTION SPECIFICATIONS

Sheet Thickness	0.5 - 10 mm	Line-dependent; thin-gauge from 0.3 mm
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
UV Stabilisation	Optional	Masterbatch add-on for outdoor grades
Colour Matching	Pantone & RAL	Spectrophotometer ΔE validation, batch-traced

SURFACE TEXTURES



HOW TO READ THESE NUMBERS

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

• Tensile Strength

Pulling force before the sheet permanently yields.

• Elongation

How far it stretches before snapping. 700% = very ductile.

• Flexural Modulus

Bending stiffness. Higher = more rigid when flexed.

• Tensile Impact

Energy absorbed in a fast pull. Higher = tougher.

• ESCR

Resistance to cracking under stress + chemicals. >1000 h = excellent.

• Density

Mass vs water. 0.948 = true high-density PE.

• Flow Rate (HLMI)

How easily molten HDPE flows. Affects forming.

• Vicat / HDT

Heat at which it softens (Vicat) or sags (HDT).

• Brittleness Temp

Coldest temp before it turns brittle. < -75 °C.

• Shore D

Surface hardness / scratch resistance of the sheet.

• NSF 61

Certified safe for potable-water contact.

• UV Stabilisation

Optional additive for long-term outdoor sunlight.

STELLAR-EX

Sheet Extrusion Excellence

INDU THERMOFORMERS PVT. LTD. / FORMPACK

 Plot No. 6 & 45, Vasai Taluka Co-op Estate, Sector 1, Gauraiapada, Vasai East, Palghar 401208, India
 +91-250-2456774 / 75 · sales@induthermoformers.com · www.induthermoformers.com

DOC: TDS-FORMGPHDPE-2026-01 · Rev 01 · Issue date: July 2026 · Stellar-Ex™ — a brand of Indu Thermoformers

ISO 9001 : 2015

Quality Management Certified

GSTIN 27AADCM9861D1ZA

Established 1985