

Photograph: machined plastic rings, Xin Longdi workshop (processing example, material not specified)

XIN LONGDI · ENGINEERING PLASTIC SHEET

HDPE Sheet

Product overview & selection guide

> Product overview and material selection guide. Not a certified technical data sheet. Company data and reference values are labelled separately throughout.

Document	Version	Language	Contact
XLD-PO-HDPE-EN	1.1 · 2026-11-01	English	xldplastics.com

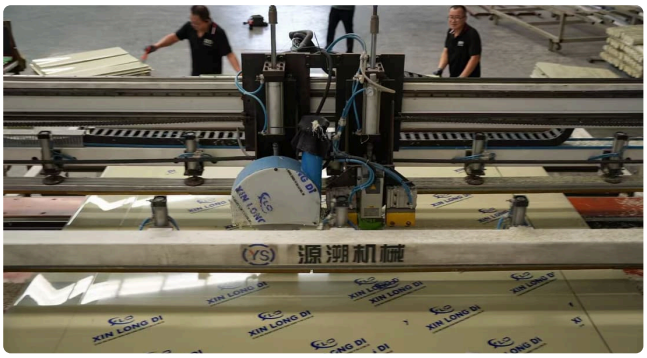
01 · PRODUCT

HDPE sheet, produced in-house, with cutting and CNC machining

Xin Longdi produces HDPE (high-density polyethylene) sheet in its own plant and cuts and machines it to drawings in the same workshop. Grade, dimensions and quantity are confirmed for each order.



Cut components · Xin Longdi workshop · processing example



Sheet cutting · Xin Longdi workshop · processing example

Supply data

A · Company data

Production	HDPE sheet produced in-house by Xin Longdi, with cutting and drawing-based CNC machining in its own workshop
Material	PE / HDPE; identify the grade and required material documents
Thickness	Confirmed for the selected grade and order
Width and length	Agreed for the chosen grade and order
Supply formats	Full sheets, cut-to-size blanks or CNC-machined parts
Application review	Wear surfaces, liners and fabricated parts; load, environment and joining confirmed
Documents	Raw-material TDS, product data and test reports only as actually available and agreed for the order

From Xin Longdi's production and supply information. Grade, dimensions, tolerances, minimum order and lead time are confirmed for each order. Available widths are confirmed per order; the 3.6 m maximum stated for PP / PPH sheet is not stated for HDPE.

How this document labels information

A · Company data From Xin Longdi production and supply records. Not laboratory test results.

B · Reference Published guideline values of named third-party grades, with source and method. Not Xin Longdi data, not typical, minimum or guaranteed values.

C · Per order Confirmed in writing for each order: tolerances, grade documents, minimum order, lead time, media and temperature suitability.

02 · REFERENCE PROPERTIES

Reference properties of a named PE-HD grade

Reference values · not Xin Longdi data. Published guideline values for one named Röchling grade, quoted to show how this material type typically behaves. Xin Longdi has not tested sheet to these methods. They are not typical, minimum or guaranteed values for Xin Longdi supply; flammability ratings belong to the named grade only.

Property	PE-HD reference	Unit	Test method
Density	**> 0.95**	g/cm³	DIN EN ISO 1183-1
Yield stress	**> 22**	MPa	DIN EN ISO 527
Elongation at break	**> 50**	%	DIN EN ISO 527
Tensile modulus	**> 1100**	MPa	DIN EN ISO 527
Notched impact strength (Charpy)	**> 10**	kJ/m²	DIN EN ISO 179
Shore hardness	**> 60**	Shore D	DIN EN ISO 868
Melting temperature	**130 … 135**	°C	ISO 11357-3
Vicat softening temperature (B)	**67**	°C	DIN EN ISO 306, Vicat B
Service temperature, long term	**–50 … 80**	°C	Average
Service temperature, short term (max.)	**100**	°C	Average
Linear thermal expansion	**150 … 230**	10^{-6}/K	DIN 53752
Thermal conductivity	**0.40**	W/(m·K)	DIN 52612-1
Water absorption	**< 0.01**	%	DIN EN ISO 62
Flammability	**HB · B2**	—	UL 94 (3 mm / 6 mm) · DIN 4102 (3–10 mm)

Source

1. **PE-HD (PE 300)** — Röchling Industrial, Polystone® G HD + UV-stabilized natural. Product page guideline values (product 718565). https://www.roechling.com/industrial/materials/thermoplastics/industrial-plastics/pe/pe-hd-pe-300/polystone-g-hd-uv-stabilized-natural-718565 (retrieved 2026-10-31).

Reading the table

- Values are for the named grade only. Another grade, thickness or test condition gives different results.
- To specify HDPE sheet from Xin Longdi, agree the commercial grade and the document set (raw-material TDS, product data or test report) for your order.
- Material values are not design allowables.

03 · SELECTION & FABRICATION

When HDPE is the right sheet

HDPE stays tough at low temperature (long-term service down to –50 °C in the reference grade) and resists impact and wear.

It is less stiff than PP and has a lower upper service temperature (about 80 °C long term in the reference grade). For hotter or stiffer duty, compare PP-H.

Its low friction and low water absorption suit sliding, wear and liner parts.

Temperature, stiffness, impact and flammability statements are based on the reference grade in section 02 (B · Reference), not on Xin Longdi test results.

Typical uses (after application review)

- Tank and pit liners, covers and panels
- Wear strips, slide and guide parts
- Machined components such as rings, plates and blocks
- Water and aquaculture equipment parts
- Parts for low-temperature or impact-loaded service

Chemical resistance

Polyethylene resists many aqueous acids, alkalis and salt solutions. Strong oxidising agents, some solvents and elevated temperatures can attack or swell it, and some media can cause environmental stress cracking under load.

Check the specific medium against the resin supplier's resistance list and recognised references such as ISO/TR 10358, and send us your media list. This document gives no chemical resistance guarantee.

Fabrication at Xin Longdi

Xin Longdi cuts HDPE sheet to size and machines it to drawings: profiles, holes, pockets and mating features. Further fabrication can be reviewed with the drawing; the joining method for welded parts is agreed per project.



Machined rings · Xin Longdi workshop · processing example

Tolerances and inspection C · Per order

Agreed in a written technical annex for each order; no conformity with a product standard is claimed here.

04 · REQUEST FOR QUOTATION

What to include in your enquiry

01	Material and grade, or the application if the grade is open	02	Thickness, width and length; or the drawing with revision
03	Quantity, and whether full sheets, cut blanks or finished parts	04	Surface, colour and protective film requirements
05	Media, concentration and operating temperature (continuous / peak)	06	Tolerances, acceptance method and required documents
07	Packing, delivery country or port and target date	08	For fabricated parts: welding, assembly and inspection scope

Confirmed for each order

C · Per order

- Dimensional tolerances and acceptance method
- Commercial grade, TDS and test documents
- Minimum order, lead time and packing
- Chemical and temperature suitability for your media

Request a Quote ↗

Send your requirements or drawing. We review material, dimensions and fabrication scope before quoting.

Email
info@xldplastics.com

WhatsApp
+86 189 5338 1027

Website
View product ↗
xldplastics.com

Zibo Xin Longdi Environmental Protection Technology Co., Ltd.
South Workshop, No. 38 Yida Road, Nanding Town, Zhangdian District, Zibo, Shandong, China
Alternative email: jingbo0020@gmail.com

Document control

Document	HDPE Sheet — Product Overview & Selection Guide (XLD-PO-HDPE-EN)
Version / date	1.1 · 2026-11-01 · English
Nature	Product overview and material selection guide. Not a certified technical data sheet. Prepared from Xin Longdi's published supply records and named public references. It does not certify product properties, compliance or suitability for a specific use.
Current version	https://xldplastics.com/documents/technical/xld-hdpe-sheet-overview-en-v1.0.pdf · product page https://xldplastics.com/en/products/plastic-sheets/pe-hdpe-sheet
Revision	1.0 - First issue. 1.1 - Removed the unconfirmed thickness range; confirm thickness for the grade and order.