Innovative Plastic Sheet and Box Maker

Polyreflex Hi-Tech Co., Ltd.

Polyreflex team with over 15 year experiences, specializing in the manufacture of lightweight plastic sheets, one-stop solution for thermoforming, machining, and assembly, dedicated to signs and displays, logistics and packaging, vehicles, and chemical industries. Warmly welcome project purchasing managers, wholesalers, individual consumers and designers to write us your requirements.

Helen G

helen@polyreflex.com +8613828266785 helenlee7608

Polyreflex

Company profile

∞ Our products ∞ solutions

710 We employ 710 employees

15 More than 15 years technology know-how

100% We are there for you with 100% engagement

6 At 6 locations

89,000 Over 89,000 m2 production area

38 Sell more than 38 countries and regions

60,000 Every year we produce 60,000 tons Polyreflex materials

1 Everything from 1 source

Polyreflex Ultra-high Molecular Weight Polyethylene Sheet

Impact Resistance | Low Temperature Resistance | Abrasion Resistance

Description

Polyreflex Ultra-high Molecular Weight Polyethylene Sheet

also known as UHMWPE sheet or UPE sheet, it is an unbranched linear polyethylene with a molecular weight of more than 1.5 million that is manufactured through compression molding process.

UHMWPE is a thermoplastic engineering plastic with a linear structure with excellent comprehensive properties. UHMWPE is a polymer compound that is difficult to process, and has many excellent properties such as super wear resistance, self-lubrication, high strength, stable chemical properties, and strong anti-aging properties.
It has shown great advantages in the high-performance engineering plastics market, from mooring lines in offshore oil fields to high-performance lightweight composites. At the same time, it plays a pivotal role in the fields of aviation, aerospace, and maritime defense equipment in modern warfare.

Abrasion Resistance
Its abrasion resistance ranks first in plastics, which is 8 times that of ordinary carbon steel, and its strength is higher than that of most metals.

Excellent Impact Strength
Compared with common plastic boards, UHMWPE boards have excellent impact strength, 6 times that of ABS, especially in low temperature environment.

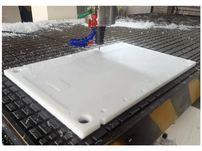
Corrosion Resistance
Its high chemical and technical properties make it ideal for use in the marine industry without corrosion or aging.

Low Temp Resistance
UHMWPE sheet can withstand extremely low temperature environment, the lowest can reach -100 degrees Celsius and keep working without brittle cracks.

Safety Material
UHMWPE sheet is safe, tasteless, non-toxic and odorless, it can be in contact with food and is suitable for food manufacturing.

What Products Can We Offer?

Polyreflex HDPE Sheet (High Density Polyethylene Sheet) product series includes **industrial HDPE sheet, food-grade HDPE sheet and UHMWPE sheet.**
The common surface type for UHMWPE sheets is smooth. We also offer UHMWPE panels with non-slip embossed surfaces. As for its color, it can be plain color or mixed color, which can be customized. For manufacturers of PE products, we can also supply you with PE bar material and PE welding rod.



Black UHMWPE sheet with anti-slip surface

Embossed UHMWPE sheet with anti-slip surface

Plain color UHMWPE sheet, color can be customized

Mixed color UHMWPE sheet

Specifications

Thickness	6mm - 100mm
Standard Size	1000*2000mm,1220*2440mm,1220*3050mm,1525*3050mm,1300*2800mm, 1480*4980mm, 2000*6050mm
Density	0.96 - 1 g/cm3
Surface	Smooth and embossed (anti-slip)
Color	Nature, white, black, yellow, green, blue, red, etc.
Processing Service	CNC machining, milling, moulding, fabrication and assembly

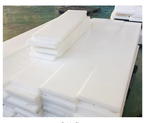
What Processing Can We Provide?

CNC Machining

We provide CNC machining services for UHMWPE sheet or bar. We can provide the precise dimensions according to request, as well as custom shapes, industrial mechanical parts and mechanical transmission equipment such as rails, chutes, gears, etc.

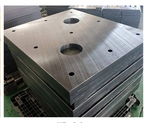
Milling Surface

UHMWPE sheets produced by compression molding, it has excellent abrasion resistance and impact resistance. With such a production technical, the product is not flat enough. It needs to do surface milling for some applications where a flat surface required and make uniform thickness of UHMWPE sheet.



Cut to Size

CNC Machining



Milling Surface

Fabrication Service

Bending (the longest bending length is 7 meters)

Welding

Butt Welding

What Can Our UHMWPE Sheets Be Used For?

Indoor Ice Sports Venue

In indoor ice sports venues such as skating, ice hockey, and curling, we can always see UHMWPE sheets. It has excellent low temperature resistance, wear resistance and toughness, and can function normally in ultra-low temperature environment without common plastic aging such as poor toughness and embrittlement.

Mechanical Buffer Pad / Road Plate

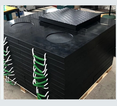
The buffer pads or bearing pads of the outriggers of construction machinery and equipment often need to have very high strength and toughness, which can reduce the deformation of the pad itself when subjected to force, and provide more stable support for construction machinery. And UHMWPE is an ideal material for making pads or mats. With similar application requirements are road plates, we offer UHMWPE sheets with a non-slip and wear-resistant surface suitable for heavy-duty truck driving.

Food and Medical

The food industry clearly points out that all materials that come into contact with food must be non-toxic, water-resistant and non-adhesive. UHMWPE is considered to be one of the materials that can be in direct contact with food. It has the advantages of no water absorption, no cracking, no deformation, and no mildew, making it an ideal accessory material for beverage and food conveyor lines. UHMWPE has good cushioning, reduced noise, reduced wear, low maintenance costs, and reduced power loss. Therefore, it can also be used to manufacture parts in production equipment such as meat deep processing, snacks, milk, candy and bread.

Wear-resistant Accessories

Once the wear resistance of ultra-high molecular weight polyethylene (UHMWPE) was discovered, the super wear resistance made it unique, attracting a large number of users and firmly occupying a place in wear-resistant accessories, especially chain guides. Benefiting from its excellent wear resistance and impact resistance, it is widely used in the machinery manufacturing industry and can be used to make various mechanical parts such as gears, cams, impellers, rollers, pulleys, bearings, bushings, cut shafts, gaskets, elastic couplings, screws, etc.



Fender

The 3 million molecular weight polyethylene sheet has extremely high wear resistance, low friction coefficient, weather resistance and low maintenance cost, making it the preferred material for fenders in port terminals. UHMWPE fenders are very easy to install to steel, concrete, wood and rubber.

Silo Lining / Carriage Lining

The high wear resistance, high impact resistance and self-lubricating properties of UHMWPE sheet make it suitable for the lining of hoppers, silos and chutes of coal, cement, lime, mines, salt and grain powdery materials. It can effectively avoid the adhesion of the conveyed material and ensure a stable transportation.

If you would like to discuss your specific product requirements further, please feel free to contact us.

http://www.polyreflex.com/

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