

<https://electricship.com/topics/hdpe-boat.html>

HDPE Boat

HDPE high density polyethylene thermoplastic used for boat building and has become a new trend. Known for its high strength-to-density ratio, the density of HDPE can range from 930 to 970 kg m³. Being lighter than water has an enormous advantage in the marine field. The HDPE is resistant to many solvents making it a perfect choice for the boat building industry.

4/9/2024

HDPE Bulk Price

White bulk HDPE pellets are around \$.50 to \$2 per pound. You would need to heat and mold a product, or do some type of continuous sheet lamination, plastic welding, sheet 3D printing (using HDPE welder head on large CNC type grid).

HDPE density is 930 to 970 kg per cubic meter.

HDPE weight is 59.93 pounds per cubic foot or .03 lbs per cubic inch. A 48 x 96 inch sheet of one inch thickness would be $48 \times 96 \times .03 \times 1 \text{ inch} = 138.24 \text{ lbs}$.

$48 \times 96 \times .03 \times 1/2 \text{ inch} = 69.12 \text{ lbs}$.

HDPE weighs *0.96 gram per cubic centimeter* or *960 kilogram per cubic meter*, i.e. density of *HDPE* is equal to 960 kg/m^3 . In Imperial or US customary measurement system, the density is equal to *59.93 pound per cubic foot* [lb/ft^3], or *0.555 ounce per cubic inch* [oz/inch^3].

Recycled HDPE (bale) can be acquired for less, or even collected and process reduced for your application.

While the average cost of bulk steel is \$.42 per pound, once it is shaped, the value skyrockets. Add to that transportation.

Recycled

A sheet of 4 x 8 ft cold rolled 10 gauge steel is \$487.51 and is 5.63 lbs per foot.

From MK Metal on 1 July 2022:

A sheet of 1/4 inch 48 inch by 96 inch Steel is \$563.83

A sheet of 1/2 inch 48 inch by 96 inch Steel is \$1,127.66

A sheet of 1 inch 48 inch by 96 inch Steel is \$3,261.48

From US Plastics 1 July 2022:

A sheet of 1/16 inch 48 inch by 96 inch HDPE is \$68.54

A sheet of 1/4 inch 48 inch by 96 inch HDPE is \$183.60

A sheet of 3/8 inch 48 inch by 96 inch HDPE is \$275.35

A sheet of 1/2 inch 48 inch by 96 inch HDPE is \$367.16

A sheet of 3/4 inch 48 inch by 96 inch HDPE is \$545.46

From Shell Lumber 1 July 2022:

A sheet of 3/8 inch 48 inch by 96 inch HDPE is \$99.99

A sheet of 1/4 inch 48 inch by 96 inch HDPE is \$89.99

A sheet of 1/2 inch 48 inch by 96 inch HDPE is \$124.99

A sheet of 3/4 inch 48 inch by 96 inch HDPE is \$129.99

From Lowe's 1 July 2022:

A sheet of 3/4 inch 48 inch by 96 inch HDPE is \$112.00

About High Density Polyethylene (HDPE)

HDPE is the sturdiest and most inflexible type of polyethylene within polyethylene applications. Its sturdy and moderately robust character can be used for a wide range of applications. HDPE is defined by having a density greater than or equal to .941 g/cm³. High-density polyethylene (HDPE) represents the most common portion of the polyethylene applications. HDPE offers excellent impact resistance, lightweight, low moisture absorption and high tensile strength. Additionally, HDPE is also nontoxic and non-staining.
