

HDPE Sheet, Rod & Parts

Property

Product Name: HDPE.
Chemical Name and Synonym: High-density polyethylene.

HDPE

High-density polyethylene (HDPE) or polyethylene high-density (PEHD) is a thermoplastic polymer produced from the monomer ethylene.

HDPE is known for its high strength-to-density ratio. The density of HDPE ranges from 930 to 970 kg/m³. Although the density of HDPE is only marginally higher than that of low-density polyethylene, HDPE has little branching, giving it stronger intermolecular forces and tensile strength (38 MPa versus 21 MPa) than LDPE. The difference in strength exceeds the difference in density, giving HDPE a higher specific strength. It is also harder and more opaque and can withstand somewhat higher temperatures (120 °C/248 ° F for short periods).

HDPE is resistant to many different solvents, so it cannot be glued. Pipe joints must be made by welding.

The physical properties of HDPE can vary depending on the molding process that is used to manufacture a specific sample; to some degree, a determining factor is the international standardized testing methods employed to identify these properties for a specific process.

For example, in rotational molding, to identify the environmental stress crack resistance of a sample, the notched constant tensile load test (NCTL) is put to use.

Owing to these desirable properties, pipes constructed out of HDPE are ideally applicable for drinking water and waste water (storm and sewage).

HDPE is also used for cell liners in subtitle D sanitary landfills, wherein large sheets of HDPE are either extrusion welded or wedge welded to form a homogeneous chemical-resistant barrier, with the intention of preventing the pollution of soil and groundwater by the liquid constituents of solid waste.

HDPE is preferred by the pyrotechnics trade for mortars over steel or PVC tubes, being more durable and safer: HDPE tends to rip or tear in a malfunction instead of shattering and becoming shrapnel like the other materials.

Applications

- 3D printer filament
- Arena board (puck board)
- Backpacking frames
- Ballistic plates
- Banners
- Bottle caps
- Boats
- Chemical containers
- Chemical-resistant piping
- Coax cable inner insulator
- Conduit protector for electrical or communications cables
- Corrosion protection for steel pipelines
- Electrical and plumbing boxes

Jiangxi Beluns Plastics Co., Ltd. is a professional manufacturer of high performance plastics, fluoroplastics and general engineering plastics such as plates, bars, films and various special-shaped parts. The raw materials for plastic products can be processed according to the brand type specified by the customer. Extrusion, molding, turning, cnc processing are our main processing types. Products made from each material have different uses. Please contact us to select the appropriate plastic material for processing. Some of the data comes from the Internet, Understand if something is wrong

- Far-IR lenses
- Fireworks
- Folding chairs and tables
- Food storage containers
- Fuel tanks for vehicles
- Geomembrane for hydraulic applications (such as canals and bank reinforcements)
- Geothermal heat transfer piping systems
- Heat-resistant firework mortars
- Housewrap (Tyvek)
- Hovercraft: The material is too heavy and dense for such craft but is still used occasionally
- Ionizing radiation shield
- Laundry detergent jugs
- Lasts for shoes
- Microwave telescope windows
- Milk jugs
- Natural gas distribution pipe systems
- Piping for fluid, slurry and gas purposes
- Plastic bags
- Plastic bottles suitable both for recycling or re-use
- Plastic surgery (skeletal and facial reconstruction)
- Potable water mains
- Root barrier
- Shampoo bottles
- Sewage mains
- Snowboard rails and boxes
- Stone paper
- Storage sheds
- Swimming pool installation
- Trackout control mats
- Telecom ducts
- Water pipes for domestic water supply and agricultural processes
- Wood plastic composites (utilizing recycled polymers)

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