

# HDPE PE300 (High-Density Polyethylene)

Polyethylene Sheets & Rods — Technical Datasheet

DIODE TRADING EST  
Dammam, Saudi Arabia

HDPE PE300 is an economical, chemically resistant polyethylene that is easy to weld, machine and fabricate. It is widely used for tanks, chemical and water handling, food-contact surfaces, cutting boards and general fabrication.

## Specification

|                     |                                                                          |
|---------------------|--------------------------------------------------------------------------|
| Material            | HDPE, molecular weight approx. 0.3 million g/mol (PE300)                 |
| Standard Colours    | Natural (white), black; green, blue, yellow and other colours on request |
| Forms               | Sheets, round rods, welding rods; cut-to-size parts                      |
| Sheet Thickness     | Approx. 2 mm to 100 mm                                                   |
| Rod Diameter        | Approx. 10 mm to 300 mm                                                  |
| Standard Sheet Size | 1000 x 2000 mm, 1220 x 2440 mm, 1500 x 3000 mm, or cut to size           |

## Material Properties (typical values)

| Property                  | Typical Value                       |
|---------------------------|-------------------------------------|
| Density                   | 0.95 - 0.96 g/cm <sup>3</sup>       |
| Tensile strength at yield | 22 - 28 MPa                         |
| Elongation at break       | > 500%                              |
| Tensile modulus           | 1,000 - 1,400 MPa                   |
| Hardness                  | Shore D 63 - 66                     |
| Melting point             | approx. 130°C                       |
| Service temperature       | -50°C to +80°C                      |
| Water absorption          | < 0.01%                             |
| Coefficient of friction   | 0.25 - 0.30 (dry on steel)          |
| Dielectric strength       | approx. 45 kV/mm                    |
| Food contact              | FDA / EU-compliant grades available |

## Typical Applications

Chemical and water tanks, lining and fabrication, cutting boards and food surfaces, marine and dock parts, splash panels, pipe supports, general machined parts.

## Selection Note

For high-abrasion or sliding-wear duty, choose PE500 or UHMWPE PE1000.

## How to Order

Send the material, grade, colour, form, dimensions (thickness / diameter, width, length) and quantity, or a drawing for machined parts, to Diode Trading EST at [www.diode.sa](http://www.diode.sa) or +966 51 083 8213. Material test certificates are available on request.

**Notice:** Values are typical and indicative, based on common industry grades. Exact grade, size, tolerance and performance are confirmed on quotation and against the supplier or manufacturer data and material test certificate for each batch. This sheet is not a warranty. Contact Diode Trading EST to confirm availability and specification for your application.