

# HDPE Polymer

High-Density Polyethylene

## Overview-

Polyethylene is an extremely useful and relatively low cost plastic polymer found nearly everywhere today. In general, high-density polyethylene (HDPE) is more linear in morphology resulting in higher crystallinity. HDPE is more rigid than its low density (LD) counterpart and can withstand higher temperatures than LDPE. This processable thermoplastic can be made into a variety of shapes including films, bottles, tubing, piping, sheeting, and insulation (cable wrap). Zeus focuses its manufacturing processes on liners, tubing, and insulation applications. HDPE is also highly weldable.

HDPE is lightweight with good tensile strength and exceptionally low water absorption making it particular amenable for applications in these environments. HDPE's chemical resistance has also made it a good option for lining of metal for protection against electrical-induced corrosion.



MOISTURE ABSORPTION



CHEMICAL RESISTANCE



IMPACT RESISTANCE



*We specialize in extruding customized sizes of HDPE tubing. Contact our Sales Team to help you find exactly which HDPE product is best for your next project.*

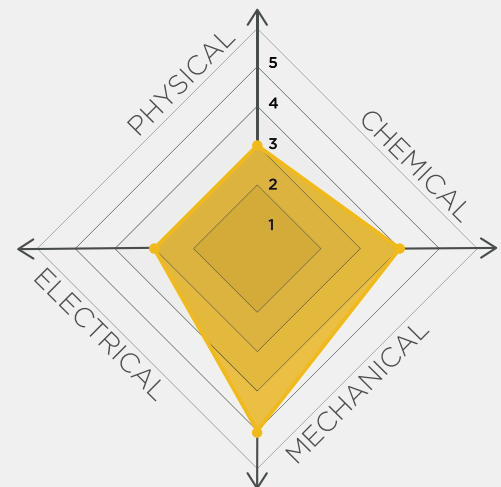
## APPLICATIONS

- Electrical and Mechanical Protection
- Hose or Pipe liners
- Fluid transfer tubing
- Medical device

## AVAILABLE PRODUCTS

- Extruded Tubing
- Dual Tube
- Special Profile
- Multi-lumen
- Metric Tubing

## QUICK SUMMARY OF PROPERTIES






# HDPE

The information presented in this publication is believed to be accurate and is not intended to constitute a specification. Property characteristics are dramatically impacted by geometry and processing method, thus properties of extruded parts may vary. In some instances, data may not be available for publication and will be notated as "na" where applicable.

These tables are meant to serve as a general guideline only. Users should evaluate the material to determine suitability for their own particular application.

| PHYSICAL  |                              | ASTM  | HDPE  |
|---|------------------------------|-------|-------|
|  | Density (g/cm <sup>3</sup> ) | D1505 | 0.940 |

| MECHANICAL  |                                 | ASTM    | HDPE |
|---|---------------------------------|---------|------|
|  | Hardness, Shore D               | D2240   | 62   |
|  | Ultimate Tensile Strength (MPa) | ISO 527 | 46.9 |
|  | Elongation at Break (%)         | ISO 527 | 510  |

