

# HDPE

# THE TOTAL PIPING SOLUTION

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800-345-ISCO



## THE TOTAL PIPING SOLUTION

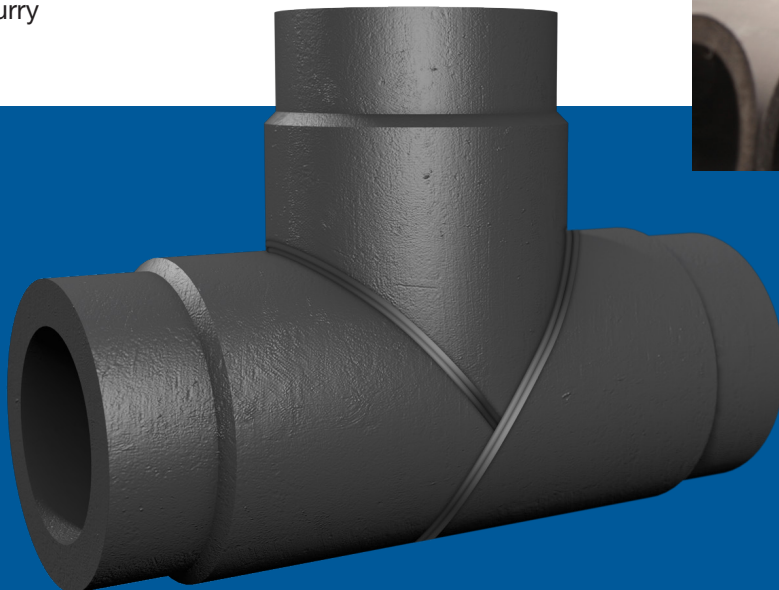
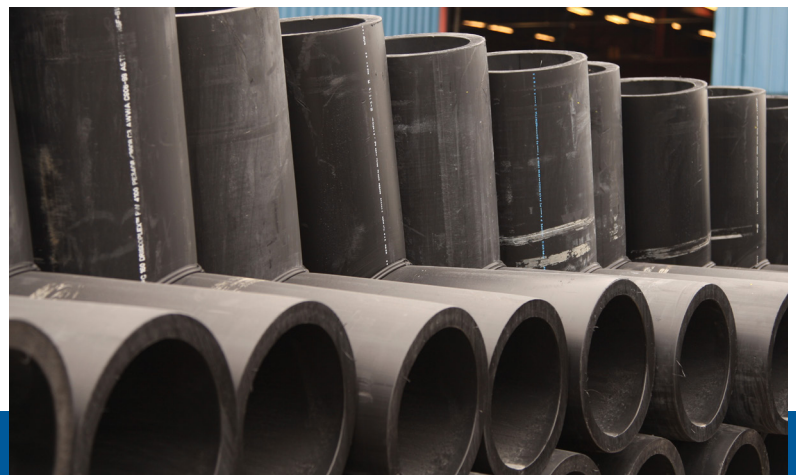
High-density polyethylene (HDPE) pipe is an exceptional piping product with a lengthy list of benefits. HDPE has been in use for more than 50 years, building decade after decade of proven performance. It is a ductile, durable, virtually inert thermoplastic that is highly resistant to cyclical fatigue and well-suited for a broad range of demanding applications. As the largest HDPE distributor in North America, ISCO Industries can provide piping solutions anywhere in the U.S. and across the globe.

## APPLICATIONS

With its strong, butt-fused joints and long-term ductility, HDPE pipe can be installed in numerous ways including above ground, direct burial, sliplining, pipe-bursting, directional drilling, and marine installations. It's also a great solution for open-cut or trenchless applications. As a leading global distributor of HDPE piping systems, fusion equipment, and fusion and fabrication services, ISCO is your primary resource for all HDPE piping needs.

We've got decades of experience in the following markets:

- Municipal Gas
- Water/Sewer
- Waterworks
- Industrial
- Aggregate
- Geothermal
- Landfill
- Slurry
- Golf and Irrigation
- Marine
- Oil Patch
- Power
- Large Diameter
- Mining
- Culvert Rehabilitation





## CHARACTERISTICS

When fused together, HDPE has a zero leak-rate because the fusion process creates a monolithic HDPE system. HDPE pipe is also a more environmentally sustainable option and is considered a green product as it is non-toxic, corrosion- and chemical-resistant, has a long design life, and is ideal for trenchless installation methods because of its flexibility. Depending on the size, polyethylene pipe has pressure ratings up to 333 psi at 73.4°F with 2:1 or greater safety factor built in.

## HDPE ADVANTAGES

- Economical
- Chemical/Corrosion Resistant
- Zero Leak-Rate
- Hydraulically Smooth
- Fatigue and Surge Resistant
- Long Design Life
- Tappable
- Easily Installed
- Compatible with other systems
- Multiple Welding Options
- Weather Resistant
- Impact Resistant
- Freeze Resistant
- Small to Large Diameters
- Non-Toxic, Non-Tasting
- Lightweight
- Reliable
- Long-term strength and ductility
- Flexible and Coil-able
- Heat-fused
- Mechanically Joined (As Needed)
- Durable
- Abrasion Resistant
- Inert
- Self-Restrained Pipe (Monolithic)
- Listed and Approved

## JOINT AS STRONG OR STRONGER THAN THE PIPE ITSELF

Typically, polyethylene pipe and fittings are connected by means of heat fusion, which is done by utilizing a fusion machine that holds the pipe or fitting in a stationary position. A facer that has a cutting blade then trims the ends to be mated. A heater plate is positioned between the ends to be connected. The heater is then removed and the ends are brought together and allowed to cool. As a result, the joint is stronger than the pipe itself and creates a leak-free system that is totally self-restrained.



## APPROVALS AND STANDARDS

As with any engineering material, there are numerous standards and codes by which HDPE pipe and fittings are produced, designed, and installed. Chief among these are the applicable standards published by ASTM International (formerly known as the American Society for Testing and Materials). Additional standards and/or codes including AWWA, DOT, or API may apply to specific installations or uses of HDPE pipe as well. What follows is a partial listing of some of the principle standards pertaining to HDPE piping within the North American market area.

### PIPE DIMENSIONS AND MANUFACTURING STANDARDS:

- ASTM F 714
- ASTM D 2513
- ASTM D 3035
- ASTM F 2619

### INSTALLATION STANDARDS:

- ASTM D 2321
- ASTM D 2774
- ASTM F 585
- ASTM F 1668
- ASTM F 1962
- ASTM F 2164

### PIPE RESIN STANDARDS:

- ASTM D 3350

### PIPE JOINING STANDARDS:

- ASTM F 2620
- ASTM D 2657
- ASTM F 1290
- ASTM F 3190

### FITTING STANDARDS:

- ASTM D 3261
- ASTM F 1055
- ASTM F 1759
- ASTM F 2206

### AMERICAN WATER WORKS ASSOCIATION STANDARDS:

- AWWA C 901
- AWWA C 906

### CANADIAN STANDARDS ASSOCIATION:

- CAN/CSA 137



ISO 9001:2008- CERTIFIED QUALITY MANAGEMENT SYSTEM

## ABOUT ISCO INDUSTRIES

Since 1962, ISCO Industries has grown to become a worldwide leader in HDPE piping. ISCO stocks and sells a wide variety of piping materials and provides custom fabrication. We offer the largest selection of HDPE fusion equipment available from the best manufacturers. Through our global footprint and experienced staff, ISCO offers piping solutions with engineered, cost-efficient packages that will deliver longer service life while reducing the total cost of operations.

This document reports accurate and reliable information to the best of our knowledge but our suggestions and recommendations cannot be guaranteed because the conditions of use are beyond our control. The user of such information assumes all risk connected with the use thereof, ISCO Industries Inc., and its subsidiaries assume no responsibility for the use of information presented herein and hereby expressly disclaim all liability in regards to such use.



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