

UNIDEX[®] HDPE



- Biggest HDPE PIPE diameter in the market
- Complete line of fittings and jointing methods
- Complete laboratory testing equipments



HDPE PIPE

Features

- **Non-Toxic**
Safe for use in water supply systems
- **Durable and Impact Resistant**
Made to withstand abuses and surge pressure events
- **Longer Life Cycle**
Estimated service life is more than 50 years with proper installation
- **Lightweight**
Easy to handle and transport thus lowering installation costs
- **Flexible**
Suited for use in uneven grounds and in earthquake-prone areas
- **Leak-Free**
Can be connected by several jointing methods which form strong and leak-tight joints
- **High Flow Capacity**
Smooth interior wall is maintained throughout the pipe's service life ensuring good hydraulic pressure
- **Resistant to Scaling and Biological Build-Up**
Does not support growth of biological agents and scale deposits in the pipe's wall
- **Chemical and Corrosion Resistant**
Does not react with other chemicals and can be used even in harsh environmental conditions
- **Abrasion Resistant**
Has low coefficient of friction because of the pipe's smooth internal surface contributing to its longer life
- **Weather Resistant**
Black HDPE pipe with the addition of carbon black is protected from degradation due to ultraviolet rays

Applications

- Potable water distribution system
- Agriculture and irrigation system
- Subducts for telecommunication lines
- Sewer and drainage system
- Industrial and waste water treatment plants
- Suction and delivery of pumps
- Air-conditioning and ventilation ducts
- Gas distribution system
- Tailings disposal from mining operation
- Sand and slurry disposal in dredging operation
- Handling of boiler ash
- Conveyance of iron ore
- Conveyance of corrosive chemicals and acid wastes
- Conveyance of marine effluents
- Conveyance of milk, fruit juices, edible oil, and other food products

Jointing Methods

- **Compression** : Available sizes 20mm to 110mm
 - Traditional
 - Non-Loose Component
- **Butt Fusion** : Available sizes 63mm to 1,200mm
- **Mechanical** : Available sizes 63mm to 1,200mm
- **Push-On** : Available sizes 90mm to 315mm
- **Electrofusion** : Available sizes 20mm to 1,000mm
- **Socket Fusion** : Available sizes 20mm to 63mm

HDPE Properties

| Property | ASTM Test Method | Unit | Value |
|--|------------------|--------------------|---------|
| Melt Index, 190°C / 2.16kg | D1238 | g/10min | 0.08 |
| Flow Index, 190°C / 21.6kg | D1238 | g/10min | 10 |
| Density | D1505 | kg/m ³ | 944 |
| Thermal Stability, 200°C | | min | > 20 |
| Tensile Yield Strength, 50mm/min | D638 | MPa | 24 |
| Tensile Break Strength, 50mm/min | D638 | MPa | 30 |
| Elongation at Break, 50mm/min | D638 | % | > 600 |
| Tensile Modulus, 1% Secant, 5mm/min | D638 | MPa | 700 |
| Flexural Modulus | D790 | kg/cm ² | 9,000 |
| Izod Impact Strength, 23°C | D256 | kg/cm ² | > 20 |
| Hardness, Shore D | D2240 | | 65 |
| Brittleness Temperature | D746 | °C | < -70 |
| Vicat Softening Point | D1525 | °C | 123 |
| Environmental Stress Crack Resistance, F ₅₀ | D1693 | hours | > 1,000 |

ISO Size

| Nominal Size | Outside Diameter | Standard Cutting Length | SDR 9 | SDR 11 | SDR 13.6 | SDR 17 |
|--------------|------------------|-------------------------|--|-----------|-----------|-----------|
| | | | Nominal Pressure PN for $\sigma_s = 6.3$ MPa | | | |
| | | | PN 16 | PN 12.5 | PN 10 | PN 8 |
| | | | Thickness | Thickness | Thickness | Thickness |
| in. | mm | m | mm | mm | mm | mm |
| 1/2 | 20 | 300 | 2.3 | - | - | - |
| 3/4 | 25 | 150 | 2.8 | 2.3 | - | - |
| 1 | 32 | 100 | 3.6 | 3.0 | 2.4 | - |
| 1-1/4 | 40 | 60 | 4.5 | 3.7 | 3.0 | 2.4 |
| 1-1/2 | 50 | 60 | 5.6 | 4.6 | 3.7 | 3.0 |
| 2 | 63 | 60 | 7.1 | 5.8 | 4.7 | 3.8 |
| 2-1/2 | 75 | 60 | 8.4 | 6.8 | 5.6 | 4.5 |
| 3 | 90 | 6 | 10.1 | 8.2 | 6.7 | 5.4 |
| 4 | 110 | 6 | 12.3 | 10.0 | 8.1 | 6.6 |
| 6 | 160 | 6 | 17.9 | 14.6 | 11.8 | 9.5 |
| 8 | 225 | 6 | 25.2 | 20.5 | 16.6 | 13.4 |
| 10 | 280 | 6 | 31.3 | 25.4 | 20.6 | 16.6 |
| 12 | 315 | 6 | 35.2 | 28.6 | 23.2 | 18.7 |
| 14 | 355 | 6 | 39.7 | 32.2 | 26.1 | 21.1 |
| 16 | 400 | 6 | 44.7 | 36.3 | 29.4 | 23.7 |
| 18 | 450 | 6 | 50.3 | 40.9 | 33.1 | 26.7 |
| 20 | 500 | 6 | 55.8 | 45.4 | 36.8 | 29.7 |
| 22 | 560 | 6 | 62.3 | 50.8 | 41.2 | 33.2 |
| 24 | 630 | 6 | 70.0 | 57.2 | 46.3 | 37.4 |

- Conforming to PE 80 of PNS ISO 4427:2002
- HDPE Pipe available in BLACK and BLUE colors
- Available size up to 1,200mmØ
- Also available in SDR 21 and SDR 24

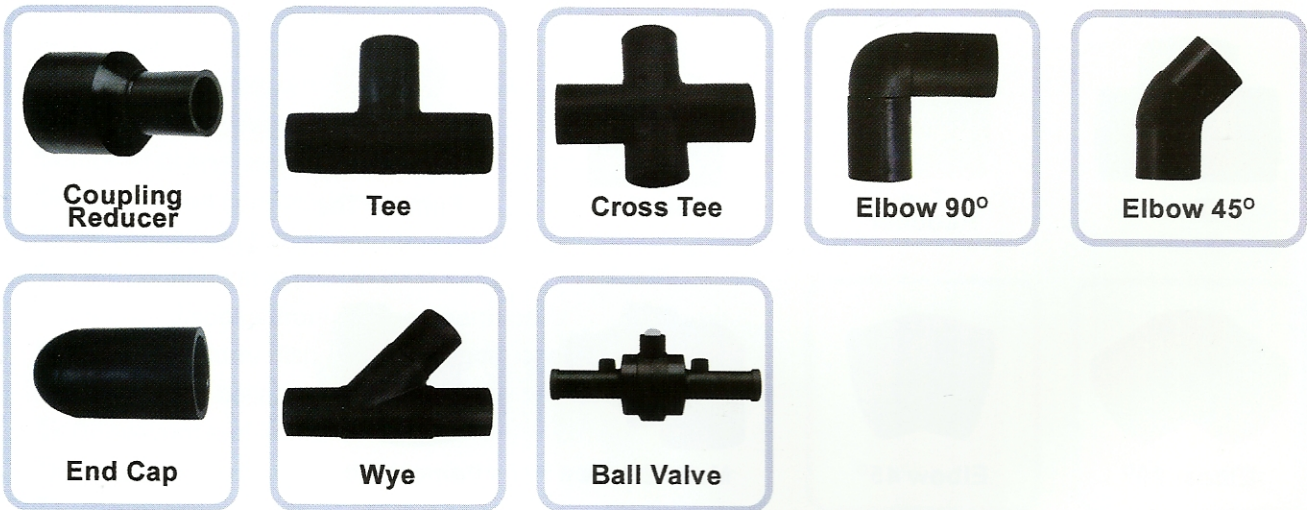
CTS Size

| Nominal Size | Outside Diameter | Standard Cutting Length | SDR 9 | SDR 11 |
|--------------|------------------|-------------------------|-----------|--------|
| | | | Thickness | |
| | | | mm | mm |
| in. | mm | m | mm | mm |
| 1/2 | 15.90 | 150 | 1.77 | 1.57 |
| 3/4 | 22.23 | 150 | 2.47 | 2.02 |
| 1 | 28.58 | 90 | 3.18 | 2.60 |
| 1-1/4 | 34.92 | 60 | 3.88 | 3.17 |
| 1-1/2 | 41.30 | 60 | 4.59 | 3.75 |
| 2 | 54.00 | 60 | 6.00 | 4.91 |

COMPRESSION



BUTT FUSION



MECHANICAL



PUSH-ON

