

45 ELBOW (BF)

COSMOIND's HDPE Molded 45 Elbows are the result of our in-house manufacturing expertise, which includes mold design, production and extensive testing. Made from High-Density Polyethylene (HDPE, PE4710/PE2708, PE100/PE80), these 45 Elbows are engineered to be fully pressure-rated, ensuring superior quality and exceptional performance.



ADVANTAGE OF HDPE

HDPE offers high strength, chemical and water resistance, lightweight and impact durability, is environmentally friendly, and performs well within a specific temperature range, making it suitable for various long-term applications.

MANUFACTURED IN ACCORDANCE WITH:

AWWA C901	Polyethylene (PE) Pressure Pipe and Tubing, 3/4 In. Through 3 In. for Water Service
AWWA C906	Polyethylene (PE) Pressure Pipe and Fittings, 4 In. Through 65 In. for Waterworks
ASTM D2513	Standard Specification for Polyethylene (PE) Gas Pressure Pipe, Tubing, Fittings
ASTM D3261	Standard Specification for Butt Heat Fusion Polyethylene (PE) Plastic Fittings
ASTM D3350	Standard Specification for Polyethylene Plastics Pipe and Fittings Materials
ANSI/NSF 61	Drinking Water System Components - Health Effects
ANSI/NSF 372	Drinking Water System Components - Lead Content
FM 1613	Examination Standard for Polyethylene (PE) Pipe and Fittings for Underground Fire Protection Service
ISO 4427-1	Plastics piping systems for water supply and for drainage and sewerage under pressure - Part 1 : General
ISO 4427-2	Plastics piping systems for water supply and for drainage and sewerage under pressure - Part 2 : Pipes
ISO 4427-3	Plastics piping systems for water supply and for drainage and sewerage under pressure - Part 3 : Fittings
ISO 4437-1	Plastics piping systems for the supply of gaseous fuels - Part 1 : General
ISO 4437-2	Plastics piping systems for the supply of gaseous fuels - Part 2 : Pipes
ISO 4437-3	Plastics piping systems for the supply of gaseous fuels - Part 3 : Fittings

TESTED IN ACCORDANCE WITH:

ASTM D1598	Standard Test Method for Time-to-Failure of Plastic Pipe Under Constant Internal Pressure
ASTM D1599	Standard Test Method for Resistance to Short-Time Hydraulic Pressure of Plastic Pipe, Tubing, and Fittings
ASTM D2513	Standard Specification for Polyethylene (PE) Gas Pressure Pipe, Tubing, Fittings
ASTM D3261	Standard Specification for Butt Heat Fusion Polyethylene (PE) Plastic Fittings
ASTM F2634-15	Standard Test Method for Laboratory Testing of Polyethylene (PE) Butt Fusion Joints using Tensile Impact Method
ASTM F2620	Standard Practice for Heat Fusion Joining of Polyethylene Pipe and Fittings
PPI TR-33	Generic Butt Fusion Joining for Polyethylene Gas Pipe
ISO 1167-1	Determination of the resistance to internal pressure - Part 1 : General method
ISO 1167-4	Determination of the resistance to internal pressure - Part 4 : Preparation of assemblies
ISO 13953	Determination of the tensile strength and failure mode of test pieces from a butt-fused joint
ISO 11357-6	Determination of oxidation induction time and oxidation induction temperature
ISO 1133-1	Determination of the melt mass-flow rate and melt volume-flow rate of thermoplastics - Part 1 : Standard method



COSMOIND USA

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RAW MATERIALS

COSMOIND's 45 Elbows are produced utilizing a bimodal high-density polyethylene (HDPE) compound. This advanced material formulation not only delivers exceptional performance in aspects such as strength, toughness, processability, durability, impact resistance and stability but also exhibits superior mechanical properties and environmental resilience, thereby guaranteeing long-term reliability and performance.

PRODUCTION RANGE (SIZE / SDR)

SIZE 4" CTS, 6" CTS and 16" IPS // 25mm to 400mm

SDR 11 (Other SDRs are available upon request.)

PRESSURE CLASS

SDR	PE4710 for Industrial				PE4710 for Gas	SDR	PE2708 for Industrial				PE2708 for Gas
	73.4°F	100°F	120°F	140°F	73.4°F		73.4°F	100°F	120°F	140°F	73.4°F
11	200 psi	156 psi	126 psi	100 psi	125 psi	11	160 psi	124 psi	100 psi	80 psi	100 psi
17	125 psi	98 psi	79 psi	63 psi	80 psi	17	100 psi	78 psi	63 psi	50 psi	62.5 psi

SDR	PE100 for Industrial				PE100 for Gas	SDR	PE80 for Industrial				PE80 for Gas
	20°C	30°C	40°C	50°C	20°C		20°C	30°C	40°C	50°C	20°C
11	16 bar	13.6 bar	11.68 bar	10.08 bar	10 bar	11	12.5 bar	10.62 bar	9.12 bar	7.87 bar	8 bar
17	10 bar	8.5 bar	7.3 bar	6.3 bar	6.25 bar	17	8 bar	6.8 bar	5.84 bar	5.04 bar	5 bar

APPLICATIONS

Water Supply	Gas Distribution	Sewerage and Drainage
Irrigation	Industrial	Geothermal
Landscaping	Mining	Renewable Energy
Chemical and Petrochemical	Construction	Marine and Offshore
Waste Management	Telecom Conduit	Electrical Cable