

45 ELBOW (EF)

COSMOIND's HDPE Molded EF 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 EF 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 D3350	Standard Specification for Polyethylene Plastics Pipe and Fittings Materials
ASTM F1055	Standard Specification for Electrofusion Type Polyethylene Fittings
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 4427-3	Plastics piping systems for water supply and for drainage and sewerage under pressure - Part 3 : Fittings
ISO 4437-1	lastics piping systems for the supply of gaseous fuels - Part 1 : General
ISO 4437-3	lastics piping systems for the supply of gaseous fuels - Part 3 : Fittings

TESTED IN ACCORDANCE WITH:

ASTM D638	Standard Test Method for Tensile Properties of Plastics
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 F1055	Standard Test Method for Electrofusion Type Polyethylene Fittings
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 13950	Plastics pipes and fittings - Automatic recognition systems for electrofusion joints
ISO 13951	Test method for the resistance of plastic pipe/ pipe or pipe/fitting assemblies to tensile loading
ISO 13954	Peel decohesion test for polyethylene electrofusion assemblies
ISO 13955	Crushing decohesion test for polyethylene electrofusion assemblies
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



RAW MATERIALS

COSMOIND's EF 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 2" IPS to 16" IPS // 63mm to 400mm

SDR 11 (Other SDR's is available upon request.)

PRESSURE CLASS

SDR	PE4710 for Industrial				PE4710 for Gas
	73.4°F	100°F	120°F	140°F	73.4°F
11	200 psi	156 psi	126 psi	100 psi	125 psi
17	125 psi	98 psi	79 psi	63 psi	80 psi

SDR	PE2708 for Industrial				PE2708 for Gas
	73.4°F	100°F	120°F	140°F	73.4°F
11	160 psi	124 psi	100 psi	80 psi	100 psi
17	100 psi	78 psi	63 psi	50 psi	62.5 psi

SDR	PE100 for Industrial				PE100 for Gas
	20°C	30°C	40°C	50°C	20°C
11	16 bar	13.6 bar	11.68 bar	10.08 bar	10 bar
17	10 bar	8.5 bar	7.3 bar	6.3 bar	6.25 bar

SDR	PE80 for Industrial				PE80 for Gas
	20°C	30°C	40°C	50°C	20°C
11	12.5 bar	10.62 bar	9.12 bar	7.87 bar	8 bar
17	8 bar	6.8 bar	5.84 bar	5.04 bar	5 bar

APPLICATIONS

Water Supply

Irrigation

Landscaping

Chemical and Petrochemical

Waste Management

Gas Distribution

Industrial

Mining

Construction

Telecom Conduit

Sewerage and Drainage

Geothermal

Renewable Energy

Marine and Offshore

Electrical Cable