



NuMex PE4710 High Density Polyethylene Pipe

NuMex PE4710 Pipe is manufactured from a high density bimodal polyethylene copolymer. PE4710 offers an increase in mechanical properties when compared to PE3408, most significant of which is the hydrostatic design stress which allows for greater flow capacity at a given pressure rating.

Performance Features and Benefits

- Excellent chemical and corrosion resistance
- Outstanding stress crack resistance
- Lightweight and flexible
- Superior abrasion resistance
- NSF tested and certified for potable water
- High long term hydrostatic strength
- Non-toxic and non-tasting
- Tough and ductile
- Weather resistant
- Economical with a long design life

NuMex PE4710 pipe has outstanding physical properties. It does not rot; rust; pit or corrode through chemical or electrical reactions with the surrounding soil whether it is acidic, alkaline, wet, or dry. It neither supports the growth of, nor is it affected by algae, bacteria, or fungus. It is also resistant to marine biological attack.

Protection against ultraviolet degradation during extended periods of outside storage and above ground service use is provided by the addition of carbon black and chemical thermal stabilizers.

Typical Applications for NuMex PE4710 Pipe

- Municipal water service lines
- Well piping
- Lawn sprinkler systems
- Swimming pools
- Livestock watering lines
- Potable water distribution lines
- Farm and ranch irrigation
- Fiber optic innerduct
- Industrial water distribution
- Oil patch lines
- Drilling supply lines
- Sewer lines
- Marine lines
- Process cooling lines
- Ground source heat pumps
- Electrical conduit

Typical Physical Properties¹ of NuMex PE4710 Polyethylene Pipe Resin

Properties	Test Method	Typical Value
Mechanical Properties		
Tensile Strength (break), psi	ASTM D 638	5,500
Tensile Strength (yield), psi	ASTM D 638	3,625
Ultimate Elongation, %	ASTM D 638	>600
Flexural Modulus (2% Secant), psi	ASTM D 790	150,000
Thermal Properties		
Brittleness Temperature, °C	ASTM D 746	<-118
High Load Melt Index, g/10 minutes	ASTM D 1238 Condition F	8.0
Linear Coefficient of Thermal Expansion, in/in/°C (-30°C to 30°C)	ASTM D 696	8.0x10 ⁻⁵
Miscellaneous Properties		
Density, g/cm ³ (base resin)	ASTM D 1505	0.949
Density, g/cm ³ (compound)	ASTM D 1505	0.960
Hardness (Shore D)	ASTM D 2240	64
Notched Izod Impact Strength (ft-lb/in)	ASTM D 256	8
Vicat Softening Temperature (°F)	ASTM D 1525	255
Long Term Hydrostatic Strength		
@ 23°C, psi	ASTM D 2837	1,600
@ 60°C, psi	ASTM D 2837	1,000
Material Designation	PPI Recommended	PE4710
Material Cell Classification	ASTM D 3350	445576C
NuMex PE4710 is NSF Listed	Standard #14	

¹ This is a typical physical properties list representing the basic characteristics of the material and does not represent specific determinations.

Standards and Specifications

NuMex PE4710 pipe is tested and listed by the National Sanitation Foundation (NSF) and carries the NSF seal for potable water.

NuMex PE4710 pipe meets or exceeds all applicable standards including:

- NSF Standard #14
- ANSI/AWWA C901 American National Standards Institute/ American Water Works Association Standard specifications for polyethylene pressure pipe, tubing, and fittings (1/2" to 3" for water)
- ASTM D 1248 Standard specification for polyethylene plastics molding and extrusion materials
- ASTM D 3350 Standard specification for polyethylene plastics pipe and fittings material
- ASTM D 2239 Standard specification for polyethylene (PE) plastic pipe (SIDR-PR) based on controlled inside diameter
- ASTM D 3035 Standard specification for polyethylene (PE) plastic pipe (DR-PR) based on controlled outside diameter
- ASTM D 2737 Standard Specification for polyethylene (PE) plastic tubing