



SPECIFICATION FOR 250# Iron Pipe Size (I.P.S.) & Copper Tube Size (C.T.S) polyethylene Pipe & Tubing – meeting NSF Standard 14, 61 & 372

Resin Compounds –

Polyethylene materials used shall be of High Density Polyethylene (HDPE), meeting 1600 Design Stress @ 23°C or 1000 Design Stress @ 60°C applicable requirements for PE4710 pipe & tubing as defined by ASTM D-3350, Cell Classification 445576E CC3 oxidative resistance classification

Iron Pipe Size Pipe and Copper Tube Size Tubing shall conform to the specifications for each as noted below.

Pipe and Tubing shall be Permanently Indented every two-feet along the pipes barrel - identifying the pipe or tubing with Manufacturers name or Logo, Pressure rating, Nominal size, NSF–pw Logo, and QC control codes.

**Water Service Application Specifications and Standards**

**For Blue Ultra**

**250PSI PE4710, I.P.S., ASTM D-2239, SIDR 7, NSF/ANSI – 14, 61 & 372**

	<b>O.D.</b>	<b>I.D.</b>	<b>WALL</b>	<b>WT/C</b>
3/4"	1.070	.824	.118	15.2
1"	1.359	1.049	.150	24.3
1-1/4"	1.786	1.380	.197	41.8
1-1/2"	2.086	1.610	.230	58.9
2"	2.675	2.067	.295	93.5

**250PSI PE4710, C.T.S., ASTM D-2737, S0DR 9, NSF/ANSI – 14, 61 & 372**

	<b>O.D.</b>	<b>I.D.</b>	<b>WALL</b>	<b>WT/C</b>
3/4"	.875	.671	.097	10.3
1"	1.125	.865	.125	16.9
1-1/4"	1.375	1.060	.153	24.8
1-1/2"	1.625	1.253	.181	34.8
2"	2.125	1.637	.236	60.3

**MATERIAL STANDARDS**

ASTM D-3350

**INDUSTRY CONFORMATION**

AWWA C901

250 PSI SODR 9 (C.T.S.) ONLY



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**Blue Ultra** Specification for polyethylene plastic molding and extrusion material – PE4710

**Typical Raw Material Properties**

	Values		ASTM
	English Units	SI Units	Method
Density (Natural)		0.949 g/cc	D4883
Density (Blue)		0.959 g/cc	
Melt Index 190 C/ 21.6 kg		8g/10 min	D1238
Tensile Strength			
@ Yield (2 in/min)	3625 psi	25.0 MPa	D638
@ Break (2 in/min)	5500 psi	38.0 MPa	D638
Elongation			
@ Break (2 in/min)	>600%	>600%	D638
Flexural Modulus <sup>2</sup>	135,000 psi	930 MPa	D790A
Notched Izod Impact Strength	12 ft-lbf/in	12 kJ/m <sup>2</sup>	D256
Hardness (Shore D)	64	64	D2240
Brittleness Temperature	<-180° F	<-118° C	D746
Vicat Softening Point	259° F	126° C	D1525
Thermal Stability	464° F min	240° C min	D3350
Hydrostatic Design Basis			
@23° C	1600 psi	11.0 MPa	D2837
@60° C	1000 psi	6.9 MPa	D2837
Minimum Required Strength	1,450 psi	10.0MPa	ISO 9080/12162
Environmental Stress Crack Resistance <sup>3</sup>	>5,000 hrs	>5,000 hrs	D1693
Notch Tensile (PENT)	>10,000 hrs	>10,000 hrs	F1473
Cell Classification	445574E	445576E	D3350

<sup>2</sup> 2% Secant-Method 1

<sup>3</sup> Condition B