

STANDARD PIPE DATA

NOM. PIPE DIA. INCHES	ACTUAL INSIDE DIA. INCHES	ACTUAL OUTSIDE DIA. INCHES	WT./FT. POUNDS	LENGTH CONTAINING ONE CU. FT. FEET	GALLONS PER LINEAL FT. GALLONS
1/8	0.269	0.405	0.244	2,526.000	0.0030
1/4	0.364	0.540	0.424	1,383.800	0.0054
3/8	0.493	0.675	0.567	754.360	0.0099
1/2	0.622	0.840	0.850	473.910	0.0158
3/4	0.824	1.050	1.130	270.030	0.0277
1	1.049	1.315	1.678	166.620	0.0449
1 1/4	1.380	1.660	2.272	96.275	0.0777
1 1/2	1.610	1.900	2.717	70.733	0.1058
2	2.067	2.375	3.652	49.913	0.1743
2 1/2	2.469	2.875	5.793	30.077	0.2487
3	3.068	3.500	7.575	19.479	0.3840
3 1/2	3.548	4.000	9.109	14.565	0.5136
4	4.026	4.500	10.790	11.312	0.6613
4 1/2	4.560	5.000	12.538	9.030	0.8284
5	5.047	5.563	14.617	7.198	1.0393
6	6.065	6.625	18.974	4.984	1.5008
8	7.981	8.625	28.554	2.878	2.5988
10	10.020	10.750	40.483	1.826	4.0963

BARLOW'S FORMULA

Barlow's Formula is a safe, easy method for finding the relationship between internal fluid pressure and stress in the pipe wall. The formula predicts bursting pressures that have been found to be safely within the actual test bursting pressures.

It is interesting to note that the formula uses the "Outside Diameter" of pipe and is sometimes referred to as the "Outside Diameter Formula."

$$P = (2 \cdot t \cdot S) / D$$

Where:

P = internal units pressure, in psi

S = unit stress, in psi

D = outside diameter of pipe, in inches

t = wall thickness, in inches