

Pipe Engineering Data Sheet

Nom. Size (in)	DR / Pipe Stiffness	O. D. Series	Material	O.D. (in) ¹	Min. Wall (in) ¹	Avg. I.D. (in)	Wt (lbs/ft) ⁴	Safe Pulling Force (lbs) ³	Max. Working Pressure (psig) ⁵	Critical Buckling Pressure (psig) ⁶	Min. Allowable Bend Radius (ft) ⁷
4	DR 14	DIPS	Fusible C-900®	4.80	0.34	4.07	3.11	13,400	305	426	100
4	DR 18	DIPS	Fusible C-900®	4.80	0.27	4.23	2.46	10,600	235	191	100
6	SDR 17	IPS	FPVC®	6.63	0.39	5.80	4.95	21,300	250	229	138
6	SDR 21	IPS	FPVC®	6.63	0.32	5.96	4.06	17,500	200	117	138
6	SDR 26	IPS	FPVC®	6.63	0.26	6.08	3.31	14,200	160	60	138
6	DR 14	DIPS	Fusible C-900®	6.90	0.49	5.85	6.42	27,700	305	426	144
6	DR 18	DIPS	Fusible C-900®	6.90	0.38	6.09	5.08	21,900	235	190	144
6	DR 25	DIPS	Fusible C-900®	6.90	0.28	6.31	3.73	16,000	165	68	144
8	SDR 17	IPS	FPVC®	8.63	0.51	7.55	8.39	36,200	250	229	180
8	SDR 21	IPS	FPVC®	8.63	0.41	7.76	6.86	29,600	200	116	180
8	SDR 26	IPS	FPVC®	8.63	0.33	7.92	5.61	24,200	160	60	180
8	DR 14	DIPS	Fusible C-900®	9.05	0.65	7.68	11.04	47,700	305	425	189
8	DR 18	DIPS	Fusible C-900®	9.05	0.50	7.98	8.75	37,800	235	191	189
8	DR 25	DIPS	Fusible C-900®	9.05	0.36	8.28	6.41	27,600	165	68	189
10	SDR 21	IPS	FPVC®	10.75	0.51	9.67	10.65	46,000	200	116	224
10	SDR 26	IPS	FPVC®	10.75	0.41	9.87	8.71	37,500	160	60	224
10	DR 14	DIPS	Fusible C-900®	11.10	0.79	9.42	16.62	71,800	305	426	231
10	DR 18	DIPS	Fusible C-900®	11.10	0.62	9.79	13.17	56,800	235	191	231
10	DR 25	DIPS	Fusible C-900®	11.10	0.44	10.16	9.64	41,600	165	68	231
12	SDR 17	IPS	FPVC®	12.75	0.75	11.16	18.64	79,100	250	228	266
12	SDR 21	IPS	FPVC®	12.75	0.61	11.47	14.99	64,700	200	116	266
12	SDR 26	IPS	FPVC®	12.75	0.49	11.71	12.25	52,800	160	60	266
12	DR 14	DIPS	Fusible C-900®	13.20	0.94	11.20	23.50	101,600	305	426	275
12	DR 18	DIPS	Fusible C-900®	13.20	0.73	11.65	18.60	80,300	235	190	275
12	DR 25	DIPS	Fusible C-900®	13.20	0.53	12.08	13.63	58,800	165	68	275
14	DR 14	DIPS	Fusible C-905®	15.30	1.09	12.98	31.57	136,500	305	426	319
14	DR 18	DIPS	Fusible C-905®	15.30	0.85	13.50	25.00	108,000	235	190	319
14	DR 21	DIPS	Fusible C-905®	15.30	0.73	13.75	21.64	93,400	200	117	319
14	DR 25	DIPS	Fusible C-905®	15.30	0.61	14.00	18.31	79,000	165	68	319
16	DR 14	DIPS	Fusible C-905®	17.40	1.24	14.76	41.47	176,600	305	426	363
16	DR 18	DIPS	Fusible C-905®	17.40	0.97	15.35	32.35	139,700	235	191	363
16	DR 21	DIPS	Fusible C-905®	17.40	0.83	15.64	27.99	120,800	200	117	363
16	DR 25	DIPS	Fusible C-905®	17.40	0.70	15.92	23.70	102,200	165	68	363
18	DR 18	DIPS	Fusible C-905®	19.50	1.08	17.20	40.60	175,400	235	190	406
18	DR 21	DIPS	Fusible C-905®	19.50	0.93	17.53	35.13	151,700	200	117	406
18	DR 25	DIPS	Fusible C-905®	19.50	0.78	17.85	29.76	128,400	165	68	406
20	DR 14	DIPS	Fusible C-905®	21.60	1.54	18.33	62.93	272,200	305	426	450
20	DR 18	DIPS	Fusible C-905®	21.60	1.20	19.06	49.83	215,300	235	190	450
20	DR 21	DIPS	Fusible C-905®	21.60	1.03	19.42	43.10	186,100	200	117	450
20	DR 25	DIPS	Fusible C-905®	21.60	0.86	19.77	36.51	157,500	165	68	450

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24	DR 18	DIPS	Fusible C-905®	25.80	1.43	22.76	71.08	307,100	235	190	538
24	DR 21	DIPS	Fusible C-905®	25.80	1.23	23.19	61.49	265,600	200	117	538
24	DR 25	DIPS	Fusible C-905®	25.80	1.03	23.61	52.09	224,800	165	68	538
24	DR 32.5	DIPS	Fusible C-905®	25.80	0.79	24.12	40.48	174,600	125	30	538
30	DR 21	DIPS	Fusible C-905®	32.00	1.52	28.77	94.60	408,500	200	117	667
30	DR 25	DIPS	Fusible C-905®	32.00	1.28	29.29	80.14	345,800	165	68	667
30	DR 32.5	DIPS	Fusible C-905®	32.00	0.99	29.91	62.28	268,700	125	30	667
36	DR 21	DIPS	Fusible C-905®	38.30	1.82	34.43	135.51	585,100	200	117	798
36	DR 25	DIPS	Fusible C-905®	38.30	1.53	35.05	114.79	495,400	165	68	798
36	DR 32.5	DIPS	Fusible C-905®	38.30	1.18	35.80	89.15	384,600	125	30	798

Notes:

- PVC dimensions (minimum wall thickness and outside diameter) are per the following standards:

Pipe Size	DR / Pipe Stiffness	OD Series	Standard
4"-24"	Schedule Pipe (Sch)	IPS	ASTM D-1785
4"-12"	DR	DIPS	AWWA C900
4"-12"	SDR	IPS	ASTM D-2241
14"-36"	(S)DR	IPS	AWWA C905 or ASTM D-2241
14"-36"	DR	DIPS	AWWA C905
≤ 15"	SDR	Sewer	ASTM D-3034
≥ 18"	PS	Sewer	ASTM F-679

- PVC safe pull stress of 2,800 PSI is based on the minimum cell classification value of 7,000 PSI for short term tensile strength [ASTM D1784] and a safety factor of 2.5.
- PVC safe pull forces are based on minimum wall thickness and the safe pull stresses as given per Note 2.
- PVC weights are based on an average of the extruder's recorded weights, or estimated using average wall thickness and density of PVC at 73° F.
- Maximum Working Pressures are per the standard that the pipe is produced to, at 73° F [see note 1 above].
- Critical Buckling Pressures are calculated using the Modulus of Elasticity (400,000 PSI for PVC), and published Poisson's Ratio for the given material [Unibell Handbook of PVC, 4th Edition]. No safety factor is included in the calculation for Critical Buckling Pressures for PVC.
- Bend Radius calculations are based on the assumption that a fitting or flange is present/to be installed in the bend. The Bend Radius for PVC is calculated using 250 times the outside diameter of the pipe, which is based on a axial tensile stress due to bending of 800 PSI and which includes a safety factor of 2.5 compared to long term stress capacity [Unibell Handbook of PVC, 4th Edition].
- Some sizes may require special order. Schedule, sewer and other pipe sizes are available upon request. Inquire for sizes.