

## Polyethylene Flow & Velocity

FLOW VELOCITY (IN LBS. PER SQ. IN.) PER 100' OF STANDARD POLYETHYLENE PIPE (SIDR)—IPS						
Flow (GPM)	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
1	1.06	0.60				
2	2.11	1.20				
3	3.17	1.80				
4	4.22	2.41	1.48			
5	5.28	3.01	1.86			
6	6.33	3.61	2.23			
7	7.39	4.21	2.60			
8	8.45	4.81	2.97	1.72		
9		5.41	3.34	1.93		
10		6.02	3.71	2.15	1.58	
11		6.62	4.08	2.36	1.73	
12		7.22	4.45	2.57	1.89	
13		7.82	4.83	2.79	2.05	
14		8.42	5.20	3.00	2.21	
15		9.02	5.57	3.22	2.36	
20			7.42	4.29	3.15	1.91
25			9.28	5.36	3.94	2.39
30				6.44	4.73	2.87
35				7.51	5.52	3.35
40				8.58	6.30	3.82
50					7.88	4.78
60					9.46	5.74
70						6.69
80						7.65

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PRESSURE LOSS FROM FRICTION (IN LBS. PER SQ. IN.) PER 100' OF STANDARD POLYETHYLENE PIPE (SIDR)—IPS						
Flow (GPM)	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
1	0.51	0.15				
2	1.79	0.48				
3	3.77	1.00				
4	6.43	1.64	0.46			
5	9.69	2.46	0.76			
6	13.50	3.45	1.06			
7	18.00	4.59	1.37			
8	23.00	5.85	1.80	0.46		
9		7.29	2.23	0.59		
10		8.85	2.76	0.70	0.33	
11		10.60	3.27	0.85	0.39	
12		12.40	3.85	1.01	0.46	
13		14.40	4.45	1.20	0.54	
14		16.50	5.10	1.37	0.65	
15		18.70	5.76	1.56	0.76	
20			9.90	2.56	1.18	0.36
25			14.90	3.87	1.85	0.55
30				5.46	2.56	0.75
35				7.30	3.45	0.97
40				9.40	4.38	1.28
50					6.70	1.97
60					9.40	2.76
70						3.70
80						4.70

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### FLOW VELOCITY AND HEAD LOSS (IN LBS. PER SQ IN.) PER 100 FT. OF POLYETHYLENE (SDR-9)—CTS

Pipe Size	1/2"		3/4"		1"		1-1/4"		1-1/2"		2"	
FLOW GPM	Velocity	Head Loss	Velocity	Head Loss	Velocity	Head Loss	Velocity	Head Loss	Velocity	Head Loss	Velocity	Head Loss
1	1.78	3.53	0.91	0.69	0.55	0.20	0.37	0.04	0.27	0.01		
2	3.56	12.75	1.83	2.51	1.10	0.74	0.74	0.12	0.53	0.05		
3	5.34	27.01	2.74	5.32	1.66	1.57	1.11	0.26	0.80	0.11		
4	7.12	46.02	3.65	9.06	2.21	2.67	1.48	0.44	1.06	0.19		
5	8.90	69.56	4.56	13.69	2.76	4.03	1.85	0.66	1.33	0.29	0.77	0.08
6	10.68	97.51	5.48	19.19	3.31	5.65	2.22	0.92	1.59	0.41	0.93	0.11
7			6.39	25.53	3.87	7.52	2.59	1.23	1.86	0.55	1.08	0.15
8			7.30	32.69	4.42	9.63	2.96	1.57	2.12	0.70	1.24	0.19
9			8.21	40.66	4.97	11.98	3.33	1.96	2.39	0.87	1.39	0.23
10			9.13	49.43	5.52	14.56	3.70	2.38	2.65	1.06	1.55	0.29
15					8.28	30.86	5.55	5.03	3.98	2.24	2.32	0.61
20							7.40	8.58	5.30	3.82	3.09	1.03
30							11.09	18.17	7.96	8.09	4.64	2.18
40							18.49	46.81	10.61	13.80	6.19	3.71
50									13.26	20.86	7.73	5.62
60											9.28	7.87
70											10.83	10.48
80											12.38	13.42

Flow Velocity above 5' per second may create turbulence or cause damaging surge pressures.