

Joint & Through-Penetration Sealants

JOINT ESTIMATION TABLE:

Look up the joint width in the left hand column. Calculations for depths ranging from 1/8" (0.125") to 1" are provided. Stated values are for caulking. To calculate spray requirements, add actual joint width + overspray to determine JOINT WIDTH. Example: Actual joint width = 4", overspray = 1" on both sides. JOINT WIDTH would be 6". For wider joints, such as 8" joints, double the values shown in the 4" JOINT WIDTH Estimation.

JOINT WIDTH	PER 1/8" INSTALLED DEPTH			PER 1/4" INSTALLED DEPTH			PER 1/2" INSTALLED DEPTH			PER 1" INSTALLED DEPTH		
	CU IN/FT	FT/GAL	GAL/100 FT	CU IN/FT	FT/GAL	GAL/100 FT	CU IN/FT	FT/GAL	GAL/100 FT	CU IN/FT	FT/GAL	GAL/100 FT
0.5	0.8	308.0	0.3	1.5	154	0.6	3.0	77.0	1.3	6.0	38.5	2.6
0.75	1.1	205.3	0.5	2.2	102.7	1.0	4.5	51.3	1.9	9.0	25.7	3.9
1.0	1.5	154.0	0.6	3.0	77.0	1.3	6.0	38.5	2.6	12.0	19.3	5.2
1.5	2.2	102.7	1.0	4.5	51	2	9.0	25.7	3.9	18	12.8	7.8
2.0	3.0	77.0	1.3	6.0	38	2.6	12	19.3	5.2	24	9.6	10.4
2.5	3.8	61.6	1.6	8.0	31	3.3	15	15.4	6.5	30	7.7	13.0
3.0	4.5	51.3	1.9	9.0	25	3.9	18	12.8	7.8	36	6.4	15.6
3.5	5.2	44.0	2.3	11	22	4.6	21	11.0	9.1	42	5.5	18.2
4.0	6.0	38.5	2.6	12	19	5.2	24	9.6	10.4	48	4.8	20.8
5.0	7.5	30.8	3.2	15	15	6.5	30	7.7	13.0	60	3.9	26.0
6.0	9.0	25.7	3.9	18	12	7.8	36	6.4	15.6	72	3.2	31.2

THROUGH-PENETRATION ESTIMATION TABLE:

To determine sealant requirement, look up the pipe size (left-hand column) and follow across to appropriate opening size (top row). The value indicated is for round openings sealed with a 1/4" depth of sealant. A multiplier has been provided for calculating different sealant depth requirements (Sealant Depth Factor). Values have also been provided for the openings and pipe areas. If more than one pipe is running through an opening, simply add the total area of the pipes and subtract from the opening area. Then multiply by the sealant depth to calculate sealant requirements.

Pipe Size			Size of Opening (Area of Opening) In Inches										SEALANT DEPTH FACTOR					
			1.5 (1.8)	2 (3.1)	3 (7.1)	4 (12.6)	5 (19.6)	6 (28.3)	7 (38.5)	8 (50.3)	10 (78.5)	12 (113.1)	14 (153.9)	26 (530.9)	1/2" x2	5/8" x2.5	1" x4	1-1/4" x5
Trade Size	Pipe OD	Area																
1/2"	0.840	0.6	0.3	0.6	1.6	3.0	4.8	6.9	9.5	12.4	19.5	28.1	38.3	132.6				
1"	1.313	1.4	0.1	0.4	1.4	2.8	4.6	6.7	9.3	12.2	19.3	27.9	38.1	132.4				
1-1/2"	1.900	2.8			1.1	2.4	4.2	6.4	8.9	11.9	18.9	27.6	37.8	132.0				
2"	2.375	4.4			0.7	2.0	3.8	6.0	8.5	11.5	18.5	27.2	37.4	131.6				
2-1/2"	2.875	6.5			0.1	1.5	3.3	5.4	8.0	10.9	18.0	26.7	36.9	131.1				
3"	3.500	9.6				0.7	2.5	4.7	7.2	10.2	17.2	25.9	36.1	130.3				
3-1/2"	4.000	12.6					1.8	3.9	6.5	9.4	16.5	25.1	35.3	129.6				
4"	4.500	16.3					0.8	3.0	5.6	8.5	15.6	24.2	34.4	128.7				
6"	5.563	34.2							1.1	4.0	11.1	19.7	29.9	124.2				
8"	8.653	58.8									4.9	13.6	23.8	118.0				
10"	10.750	90.8										5.6	15.8	110.0				
12"	12.750	127.7											6.6	100.8				
24"	24.000	452.4												19.6				

IMPORTANT NOTE: This table is for estimation purposes only. Consult UL Fire Resistance Directory or STI Product & Application Guide for specific installation requirements and limitations.

IMPORTANT NOTE: This information is provided for estimational purposes only. Allowances should be made for waste. Values for through-penetrations are based upon Schedule 40 pipes. All values are nominal.

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