

SET Technical Information

Epoxy Adhesives

**Load-Adjustment Factors for SET Epoxy-Tie® Adhesive in Normal-Weight Concrete:
Edge Distance, Tension Load**

How to use these charts:

1. The following tables are for reduced edge distance.
2. Locate the anchor size to be used for either a tension and/or shear load application.
3. Locate the embedment (E) at which the anchor is to be installed.
4. Locate the edge distance (C_{act}) at which the anchor is to be installed.
5. The load-adjustment factor (f_c) is the intersection of the row and column.
6. Multiply the allowable load by the applicable load-adjustment factor.
7. Reduction factors for multiple edges are multiplied together.
8. Adjustment factors do not apply to allowable steel strength values.
9. Adjustment factors are to be applied to allowable Tension Load Based on Bond Strength values only.

Edge Distance Tension (f_c)



Edge Dist. C_{act} (in.)	Dia. Rebar	3/8			1/2			5/8			3/4		
		#4			#5			#6					
	E	1 3/4	3 1/2	4 1/2	2 1/8	4 1/4	6	2 1/2	5	9 3/8	3 3/8	6 3/4	11 1/4
	C_{cr}	2 5/8	5 1/4	6 3/4	3 1/4	6 3/8	9	3 3/4	7 1/2	14 1/8	5 1/8	10 1/8	16 7/8
	C_{min}	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4
	f_{cmin}	0.65	0.65	0.69	0.65	0.65	0.59	0.48	0.48	0.64	0.48	0.48	0.57
1 3/4		0.65	0.65	0.69	0.65	0.65	0.59	0.48	0.48	0.64	0.48	0.48	0.57
2		0.75	0.68	0.71	0.71	0.67	0.60	0.55	0.50	0.65	0.52	0.50	0.58
3		1.00	0.78	0.77	0.95	0.74	0.66	0.81	0.59	0.68	0.68	0.56	0.61
4			0.88	0.83	1.00	0.82	0.72	1.00	0.68	0.71	0.83	0.62	0.63
5			0.98	0.89		0.90	0.77		0.77	0.73	0.99	0.68	0.66
6			1.00	0.95		0.97	0.83		0.86	0.76	1.00	0.74	0.69
7				1.00		1.00	0.89		0.95	0.79		0.81	0.72
8							0.94		1.00	0.82		0.87	0.75
9							1.00			0.85		0.93	0.78
10										0.88		0.99	0.80
11										0.91		1.00	0.83
12										0.94			0.86
14										1.00			0.92
16													0.98
17													1.00

*See page 10 for an explanation of the load table icons

See Notes Below

Edge Distance Tension (f_c) (cont'd)



Edge Dist. C_{act} (in.)	Dia. Rebar	7/8			1			1 1/8			1 1/4				
		#7			#8			#9			#10			#11	
	E	3 7/8	7 3/4	13 1/8	4 1/2	9	15	5 1/8	10 1/8	16 7/8	5 5/8	11 1/4	18 3/4	12 3/8	20 5/8
	C_{cr}	5 7/8	11 5/8	19 5/8	6 3/4	13 1/2	22 1/2	7 3/4	15 1/4	25 3/8	8 1/2	16 7/8	28 1/8	18 5/8	28
	C_{min}	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4
	f_{cmin}	0.48	0.48	0.52	0.48	0.48	0.47	0.58	0.58	0.51	0.58	0.58	0.51	0.58	0.51
1 3/4		0.48	0.48	0.52	0.48	0.48	0.47								
2 3/4		0.61	0.53	0.55	0.58	0.52	0.50	0.58	0.58	0.51	0.58	0.58	0.51	0.58	0.51
4		0.77	0.60	0.58	0.71	0.58	0.53	0.69	0.62	0.54	0.67	0.62	0.53	0.61	0.53
6		1.00	0.70	0.63	0.92	0.67	0.58	0.85	0.69	0.58	0.82	0.68	0.57	0.67	0.57
8			0.81	0.69	1.00	0.76	0.63	1.00	0.76	0.62	0.97	0.74	0.61	0.72	0.61
10			0.91	0.74		0.85	0.68		0.82	0.67	1.00	0.80	0.65	0.77	0.65
12			1.00	0.80		0.93	0.73		0.89	0.71		0.86	0.69	0.82	0.69
14				0.85		1.00	0.78		0.96	0.75		0.91	0.73	0.88	0.73
16				0.90			0.83		1.00	0.80		0.97	0.77	0.93	0.77
18				0.96			0.89			0.84		1.00	0.80	0.98	0.81
20				1.00			0.94			0.88			0.84	1.00	0.84
24							1.00			0.97					0.92
28										1.00					1.00

1. E = Embedment depth (inches).
2. C_{act} = actual edge distance at which anchor is installed (inches).
3. C_{cr} = critical edge distance for 100% load (inches).
4. C_{min} = minimum edge distance for reduced load (inches).
5. f_c = adjustment factor for allowable load at actual edge distance.
6. f_{ocr} = adjustment factor for allowable load at critical edge distance. f_{ocr} is always = 1.00.
7. f_{cmin} = adjustment factor for allowable load at minimum edge distance.
8. $f_c = f_{cmin} + [(1 - f_{cmin}) (C_{act} - C_{min}) / (C_{cr} - C_{min})]$.

*See page 10 for an explanation of the load table icons

**Load-Adjustment Factors for SET Epoxy-Tie® Adhesive in Normal-Weight Concrete:
Edge Distance, Shear Load**

How to use these charts:

1. The following tables are for reduced edge distance.
2. Locate the anchor size to be used for either a tension and/or shear load application.
3. Locate the embedment (E) at which the anchor is to be installed.
4. Locate the edge distance (C_{act}) at which the anchor is to be installed.
5. The load-adjustment factor (f_c) is the intersection of the row and column.
6. Multiply the allowable load by the applicable load-adjustment factor.
7. Reduction factors for multiple edges are multiplied together.
8. Adjustment factors do not apply to allowable steel strength values.
9. Adjustment factors are to be applied to allowable Shear Load Based on Concrete Edge Distance values only.

Edge Distance Shear (f_c)



Edge Dist. C_{act} (in.)	Dia.	3/8			1/2		1/2		5/8		5/8		3/4		3/4	
	Rebar						#4				#5				#6	
	E	1 3/4	3 1/2	4 1/2	2 1/8	4 1/4	4 1/4	6	2 1/2	5	5	9 3/8	3 3/8	6 3/4	6 3/4	11 1/4
	C_{cr}	5 1/4	5 1/4	5 1/4	6 3/8	6 3/8	6 3/8	6 3/8	7 1/2	7 1/2	7 1/2	7 1/2	10 1/8	10 1/8	10 1/8	10 1/8
	C_{min}	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4
	f_{cmin}	0.49	0.32	0.35	0.37	0.20	0.25	0.24	0.18	0.15	0.21	0.19	0.16	0.16	0.18	0.15
1 3/4		0.49	0.32	0.35	0.37	0.20	0.25	0.24	0.18	0.15	0.21	0.19	0.16	0.16	0.18	0.15
2		0.53	0.37	0.40	0.40	0.24	0.29	0.28	0.22	0.19	0.24	0.23	0.19	0.19	0.20	0.18
3		0.67	0.56	0.58	0.54	0.42	0.45	0.45	0.36	0.33	0.38	0.37	0.29	0.29	0.30	0.28
4		0.82	0.76	0.77	0.68	0.59	0.61	0.61	0.50	0.48	0.52	0.51	0.39	0.39	0.40	0.38
5		0.96	0.95	0.95	0.81	0.76	0.78	0.77	0.64	0.63	0.66	0.65	0.49	0.49	0.50	0.48
6		1.00	1.00	1.00	0.95	0.94	0.94	0.94	0.79	0.78	0.79	0.79	0.59	0.59	0.60	0.58
7					1.00	1.00	1.00	1.00	0.93	0.93	0.93	0.93	0.69	0.69	0.69	0.68
8									1.00	1.00	1.00	1.00	0.79	0.79	0.79	0.78
9													0.89	0.89	0.89	0.89
10													0.99	0.99	0.99	0.99
11													1.00	1.00	1.00	1.00

See Notes Below

Edge Distance Shear (f_c) (cont'd)



Edge Dist. C_{act} (in.)	Dia.	7/8		7/8		1		1		1 1/8			1 1/4				
	Rebar			#7				#8		#9			#10			#11	
	E	3 7/8	7 3/4	7 3/4	13 1/8	4 1/2	9	9	15	5 1/8	10 1/8	16 7/8	5 5/8	11 1/4	18 3/4	12 3/8	20 5/8
	C_{cr}	11 5/8	11 5/8	11 5/8	11 5/8	13 1/2	13 1/2	13 1/2	13 1/2	15 1/4	15 1/4	15 1/4	16 7/8	16 7/8	16 7/8	18 5/8	18 5/8
	C_{min}	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4
	f_{cmin}	0.14	0.13	0.14	0.10	0.14	0.10	0.12	0.10	0.17	0.16	0.12	0.17	0.16	0.12	0.16	0.12
1 3/4		0.14	0.13	0.14	0.10	0.14	0.10	0.12	0.10								
2 3/4		0.23	0.22	0.23	0.19	0.21	0.18	0.19	0.18	0.17	0.16	0.12	0.17	0.16	0.12	0.16	0.12
3		0.25	0.24	0.25	0.21	0.23	0.20	0.21	0.20	0.19	0.18	0.14	0.18	0.17	0.14	0.17	0.13
4		0.34	0.33	0.34	0.31	0.30	0.27	0.29	0.27	0.25	0.24	0.21	0.24	0.23	0.20	0.23	0.19
5		0.42	0.42	0.42	0.40	0.38	0.35	0.36	0.35	0.32	0.31	0.28	0.30	0.29	0.26	0.28	0.24
6		0.51	0.50	0.51	0.49	0.45	0.43	0.44	0.43	0.39	0.38	0.35	0.36	0.35	0.32	0.33	0.30
7		0.60	0.59	0.60	0.58	0.52	0.50	0.51	0.50	0.45	0.45	0.42	0.42	0.41	0.38	0.38	0.36
8		0.68	0.68	0.68	0.67	0.60	0.58	0.59	0.58	0.52	0.51	0.49	0.48	0.47	0.45	0.44	0.41
9		0.77	0.77	0.77	0.76	0.67	0.66	0.66	0.66	0.59	0.58	0.56	0.54	0.53	0.51	0.49	0.47
10		0.86	0.86	0.86	0.85	0.74	0.73	0.74	0.73	0.65	0.65	0.63	0.60	0.59	0.57	0.54	0.52
11		0.95	0.94	0.95	0.94	0.82	0.81	0.81	0.81	0.72	0.71	0.70	0.65	0.65	0.63	0.60	0.58
12		1.00	1.00	1.00	1.00	0.89	0.89	0.89	0.89	0.78	0.78	0.77	0.71	0.71	0.70	0.65	0.63
13						0.96	0.96	0.96	0.96	0.85	0.85	0.84	0.77	0.77	0.76	0.70	0.69
14						1.00	1.00	1.00	1.00	0.92	0.92	0.91	0.83	0.83	0.82	0.76	0.74
15										0.98	0.98	0.98	0.89	0.89	0.88	0.81	0.80
16										1.00	1.00	1.00	0.95	0.95	0.95	0.86	0.85
17													1.00	1.00	1.00	0.91	0.91
18 5/8																1.00	1.00

1. E = Embedment depth (inches).
2. C_{act} = actual edge distance at which anchor is installed (inches).
3. C_{cr} = critical edge distance for 100% load (inches).
4. C_{min} = minimum edge distance for reduced load (inches).
5. f_c = adjustment factor for allowable load at actual edge distance.
6. f_{ccr} = adjustment factor for allowable load at critical edge distance. f_{ccr} is always = 1.00.
7. f_{cmin} = adjustment factor for allowable load at minimum edge distance.
8. $f_c = f_{cmin} + [(1 - f_{cmin})(C_{act} - C_{min}) / (C_{cr} - C_{min})]$.

*See page 10 for an explanation of the load table icons

SET Technical Information

Epoxy Adhesives

Load-Adjustment Factors for SET Epoxy-Tie® Adhesive in Normal-Weight Concrete: Spacing, Tension Load

How to use these charts:

1. The following tables are for reduced spacing.
2. Locate the anchor size to be used for either a tension and/or shear load application.
3. Locate the embedment (E) at which the anchor is to be installed.
4. Locate the spacing (S_{act}) at which the anchor is to be installed.
5. The load-adjustment factor (f_s) is the intersection of the row and column.
6. Multiply the allowable load by the applicable load-adjustment factor.
7. Reduction factors for multiple spacings are multiplied together.
8. Adjustment factors do not apply to allowable steel strength values.
9. Adjustment factors are to be applied to allowable Tension Load Based on Bond Strength values only.

Spacing Tension (f_s)

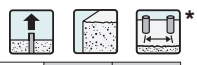


S_{act} (in.)	Dia.	3/8				1/2			5/8			3/4		
	Rebar					#4			#5			#6		
	E	1 3/4	3 1/2	4 1/2	2 1/6	4 1/4	6	2 1/2	5	9 3/8	3 3/8	6 3/4	11 1/4	
	S_{cr}	7	14	18	8 1/2	17	24	10	20	37 1/2	13 1/2	27	45	
	S_{min}	7 3/8	1 3/4	2 1/4	1 1/8	2 1/8	3	1 1/4	2 1/2	4 3/4	1 3/4	3 3/8	5 5/8	
	f_{smin}	0.52	0.89	0.90	0.52	0.89	0.90	0.52	0.89	0.90	0.52	0.89	0.90	
7/8		0.52												
1		0.53												
2		0.61	0.89		0.58			0.56			0.53			
4		0.76	0.91	0.91	0.71	0.90	0.90	0.67	0.90		0.61	0.89		
6		0.92	0.93	0.92	0.84	0.92	0.91	0.78	0.91	0.90	0.69	0.90	0.90	
8		1.00	0.95	0.94	0.97	0.93	0.92	0.89	0.92	0.91	0.78	0.91	0.91	
10			0.96	0.95	1.00	0.95	0.93	1.00	0.94	0.92	0.86	0.92	0.91	
12			0.98	0.96		0.96	0.94		0.95	0.92	0.94	0.93	0.92	
14			1.00	0.97		0.98	0.95		0.96	0.93	1.02	0.94	0.92	
16				0.99		0.99	0.96		0.97	0.93		0.95	0.93	
18				1.00		1.00	0.97		0.99	0.94		0.96	0.93	
20							0.98		1.00	0.95		0.97	0.94	
24							1.00			0.96		0.99	0.95	
28										0.97		1.00	0.96	
32										0.98			0.97	
36										1.00			0.98	
40										1.00			0.99	
45													1.00	

*See page 10 for an explanation of the load table icons

1. E = Embedment depth (inches).
2. S_{act} = actual spacing distance at which anchors are installed (inches).
3. S_{cr} = critical spacing distance for 100% load (inches).
4. S_{min} = minimum spacing distance for reduced load (inches).
5. f_s = adjustment factor for allowable load at actual spacing distance.
6. f_{scr} = adjustment factor for allowable load at critical spacing distance. f_{scr} is always = 1.00.
7. f_{smin} = adjustment factor for allowable load at minimum spacing distance.
8. $f_s = f_{smin} + [(1 - f_{smin}) (S_{act} - S_{min}) / (S_{cr} - S_{min})]$.

Spacing Tension (f_s) (cont'd)



S_{act} (in.)	Dia.	7/8			1			1 1/8			1 1/4				
	Rebar	#7			#8			#9			#10			#11	
	E	3 3/8	7 3/4	13 1/8	4 1/2	9	15	5 3/8	10 1/8	16 7/8	5 3/8	11 1/4	18 3/4	12 3/8	20 3/8
	S_{cr}	15 1/2	31	52 1/2	18	36	60	20 1/2	40 1/2	67 1/2	22 1/2	45	75	49 1/2	82 1/2
	S_{min}	2	3 3/8	6 3/8	2 1/4	4 1/2	7 1/2	2 3/8	5 3/8	8 1/2	2 3/8	5 3/8	9 3/8	6 1/4	10 3/8
	f_{smin}	0.52	0.89	0.90	0.52	0.89	0.90	0.52	0.89	0.90	0.52	0.89	0.90	0.89	0.90
2		0.52													
3		0.56			0.54			0.53			0.52				
4		0.59	0.89		0.57			0.56			0.55				
5		0.63	0.89		0.60	0.89		0.58			0.57				
6		0.66	0.90		0.63	0.90		0.61	0.89		0.60	0.89			
8		0.73	0.91	0.90	0.70	0.90	0.90	0.66	0.90		0.65	0.90		0.89	
10		0.80	0.91	0.91	0.76	0.91	0.90	0.72	0.91	0.90	0.69	0.90	0.90	0.90	
12		0.88	0.92	0.91	0.82	0.92	0.91	0.77	0.91	0.91	0.74	0.91	0.90	0.90	0.90
14		0.95	0.93	0.92	0.88	0.92	0.91	0.83	0.92	0.91	0.79	0.91	0.91	0.91	0.91
16		1.00	0.94	0.92	0.94	0.93	0.92	0.88	0.92	0.91	0.84	0.92	0.91	0.91	0.91
20			0.96	0.93	1.00	0.94	0.92	0.99	0.94	0.92	0.94	0.93	0.92	0.92	0.91
24			0.97	0.94		0.96	0.93	1.00	0.95	0.93	1.00	0.94	0.92	0.94	0.92
28			0.99	0.95		0.97	0.94		0.96	0.93		0.95	0.93	0.95	0.92
32			1.00	0.96		0.99	0.95		0.97	0.94		0.96	0.93	0.96	0.93
36				0.96		1.00	0.95		0.99	0.95		0.97	0.94	0.97	0.94
40				0.97			0.96		1.00	0.95		0.99	0.95	0.98	0.94
50				0.99			0.98			0.97		1.00	0.96	1.00	0.95
60				1.00			1.00			0.99			0.98		0.97
70										1.00			0.99		0.98
75													1.00		0.99
82 1/2															1.00

*See page 10 for an explanation of the load table icons

**Load-Adjustment Factors for SET Epoxy-Tie® Adhesive in Normal-Weight Concrete:
Spacing, Shear Load**

How to use these charts:

1. The following tables are for reduced spacing.
2. Locate the anchor size to be used for either a tension and/or shear load application.
3. Locate the embedment (E) at which the anchor is to be installed.
4. Locate the spacing (S_{act}) at which the anchor is to be installed.
5. The load-adjustment factor (f_s) is the intersection of the row and column.
6. Multiply the allowable load by the applicable load-adjustment factor.
7. Reduction factors for multiple spacings are multiplied together.
8. Adjustment factors do not apply to allowable steel strength values.
9. Adjustment factors are to be applied to allowable Shear Load Based on Concrete Edge Distance values only.

Spacing Shear (f_s)



S_{act} (in.)	Dia.	3/8		1/2		5/8		3/4		7/8	
	Rebar			#4	#5	#6	#7				
E	1 3/4	3 1/2	2 1/8	4 1/4	2 1/2	5	3 3/8	6 3/4	3 7/8	7 3/4	
S_{cr}	2 5/8	5 1/4	3 1/4	6 3/8	3 3/4	7 1/2	5 1/8	10 1/8	5 7/8	11 5/8	
S_{min}	7/8	1 3/4	1 1/8	2 1/8	1 1/4	2 1/2	1 3/4	3 3/8	2	3 7/8	
f_{smin}	0.90	0.83	0.90	0.83	0.90	0.83	0.90	0.83	0.90	0.83	
7/8		0.90									
1		0.91									
1 1/2		0.94		0.92		0.91					
2		0.96	0.84	0.94		0.93		0.91		0.90	
2 1/2		0.99	0.87	0.96	0.85	0.95	0.83	0.92		0.91	
3		1.00	0.89	0.99	0.87	0.97	0.85	0.94		0.93	
3 1/2			0.92	1.00	0.89	0.99	0.86	0.95	0.83	0.94	
4			0.94		0.91	1.00	0.88	0.97	0.85	0.95	0.83
5			0.99		0.95		0.92	1.00	0.87	0.98	0.85
6			1.00		0.99		0.95		0.90	1.00	0.88
7					1.00		0.98		0.92		0.90
8							1.00		0.95		0.92
9									0.97		0.94
10									1.00		0.96
12											1.00
14											
16											
17											
18 5/8											

*See page 10 for an explanation of the load table icons

See Notes Below

Spacing Shear (f_s) (cont'd)

S_{act} (in.)	Dia.	1		1 1/8		1 1/4		
	Rebar	#8	#9	#10	#11			
E	4 1/2	9	5 1/8	10 1/8	5 5/8	11 1/4	12 3/8	
S_{cr}	6 3/4	13 1/2	7 3/4	15 1/4	8 1/2	16 7/8	18 5/8	
S_{min}	2 1/4	4 1/2	2 5/8	5 1/8	2 7/8	5 5/8	6 1/4	
f_{smin}	0.90	0.83	0.90	0.83	0.90	0.83	0.83	
7/8								
1								
1 1/2								
2								
2 1/2		0.91						
3		0.92		0.91		0.90		
3 1/2		0.93		0.92		0.91		
4		0.94		0.93		0.92		
5		0.96	0.84	0.95		0.94		
6		0.98	0.86	0.97	0.84	0.96	0.84	
7		1.00	0.88	0.99	0.86	0.97	0.85	0.84
8			0.90	1.00	0.88	0.99	0.87	0.85
9			0.92		0.90	1.00	0.88	0.87
10			0.93		0.91		0.90	0.88
12			0.97		0.95		0.93	0.91
14			1.00		0.98		0.96	0.94
16					1.00		0.99	0.96
17							1.00	0.98
18 5/8								1.00



*See page 10 for an explanation of the load table icons

1. E = Embedment depth (inches).
2. S_{act} = actual spacing distance at which anchors are installed (inches).
3. S_{cr} = critical spacing distance for 100% load (inches).
4. S_{min} = minimum spacing distance for reduced load (inches).
5. f_s = adjustment factor for allowable load at actual spacing distance.
6. f_{scr} = adjustment factor for allowable load at critical spacing distance. f_{scr} is always = 1.00.
7. f_{smin} = adjustment factor for allowable load at minimum spacing distance.
8. $f_s = f_{smin} + [(1 - f_{smin}) (S_{act} - S_{min}) / (S_{cr} - S_{min})]$.

Load-Adjustment Factors for SET Epoxy-Tie® Adhesive in Sand-Lightweight Concrete: Edge Distance, Tension and Shear Loads

How to use these charts:

1. The following tables are for reduced edge distance only.
2. Locate the anchor size to be used for either a tension and/or shear load application.
3. Locate the embedment (E) at which the anchor is to be installed.
4. Locate the edge distance (C_{act}) at which the anchor is to be installed.
5. The load-adjustment factor (f_c) is the intersection of the row and column.
6. Multiply the allowable load by the applicable load-adjustment factor.
7. Reduction factors for multiple edges are multiplied together.
8. Adjustment factors do not apply to allowable steel strength values.
9. Adjustment factors are to be applied to allowable Tension Load Based on Bond Strength values or allowable Shear Load Based on Concrete Edge Distance values only.

Edge Distance Tension (f_c)



Edge Dist. C_{act} (in.)	Dia.	3/8		1/2		5/8								
		E	C_{cr}	C_{min}	f_{emin}	E	C_{cr}	C_{min}	f_{emin}	E	C_{cr}	C_{min}	f_{emin}	
		1 3/4	3 1/2	2 1/8	4 1/4	2 1/2	5							
		2 5/8	5 1/4	3 1/8	6 3/8	3 3/4	7 1/2							
		1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4							
		0.65	0.65	0.65	0.65	0.48	0.48							
1 3/4		0.65	0.65	0.65	0.65	0.48	0.48							
2		0.75	0.68	0.71	0.67	0.55	0.50							
2 1/4		0.85	0.70	0.78	0.69	0.61	0.53							
2 1/2		0.95	0.73	0.84	0.71	0.68	0.55							
2 3/4		1.00	0.75	0.90	0.73	0.74	0.57							
3			0.78	0.97	0.74	0.81	0.59							
3 1/4			0.80	1.00	0.76	0.87	0.62							
3 1/2			0.83		0.78	0.94	0.64							
3 3/4			0.85		0.80	1.00	0.66							
4			0.88		0.82		0.68							
4 1/4			0.90		0.84		0.71							
4 1/2			0.93		0.86		0.73							
4 3/4			0.95		0.88		0.75							
5			0.98		0.90		0.77							
5 1/4			1.00		0.91		0.80							
5 1/2					0.93		0.82							
5 3/4					0.95		0.84							
6					0.97		0.86							
6 1/4					0.99		0.89							
6 1/2					1.00		0.91							
6 3/4							0.93							
7							0.95							
7 1/4							0.98							
7 1/2							1.00							

1. E = Embedment depth (inches).
2. C_{act} = actual edge distance at which anchor is installed (inches).
3. C_{cr} = critical edge distance for 100% load (inches).
4. C_{min} = minimum edge distance for reduced load (inches).
5. f_c = adjustment factor for allowable load at actual edge distance.
6. f_{ocr} = adjustment factor for allowable load at critical edge distance. f_{ocr} is always = 1.00.
7. f_{emin} = adjustment factor for allowable load at minimum edge distance.
8. $f_c = f_{emin} + [(1 - f_{emin}) (C_{act} - C_{min}) / (C_{cr} - C_{min})]$.

Edge Distance Shear (f_c)



Edge Dist. C_{act} (in.)	Dia.	3/8		1/2		5/8								
		E	C_{cr}	C_{min}	f_{emin}	E	C_{cr}	C_{min}	f_{emin}	E	C_{cr}	C_{min}	f_{emin}	
		1 3/4	3 1/2	2 1/8	4 1/4	2 1/2	5							
		2 5/8	5 1/4	3 1/8	6 3/8	3 3/4	7 1/2							
		1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4							
		0.25	0.25	0.20	0.20	0.15	0.15							
1 3/4		0.25	0.25	0.20	0.20	0.15	0.15							
2		0.46	0.30	0.35	0.24	0.26	0.19							
2 1/4		0.68	0.36	0.49	0.29	0.36	0.22							
2 1/2		0.89	0.41	0.64	0.33	0.47	0.26							
2 3/4		1.00	0.46	0.78	0.37	0.58	0.30							
3			0.52	0.93	0.42	0.68	0.33							
3 1/4			0.57	1.00	0.46	0.79	0.37							
3 1/2			0.63		0.50	0.89	0.41							
3 3/4			0.68		0.55	1.00	0.45							
4			0.73		0.59		0.48							
4 1/4			0.79		0.63		0.52							
4 1/2			0.84		0.68		0.56							
4 3/4			0.89		0.72		0.59							
5			0.95		0.76		0.63							
5 1/4			1.00		0.81		0.67							
5 1/2					0.85		0.70							
5 3/4					0.89		0.74							
6					0.94		0.78							
6 1/4					0.98		0.82							
6 1/2					1.00		0.85							
6 3/4							0.89							
7							0.93							
7 1/4							0.96							
7 1/2							1.00							

*See page 10 for an explanation of the load table icons

Load-Adjustment Factors for SET Epoxy-Tie® Adhesive in Face of Wall Installation in 8" Grout-Filled CMU: End / Edge Distance and Spacing, Tension and Shear Loads

How to use these charts:

1. The following tables are for reduced end and edge distance and spacing.
2. Locate the anchor size to be used for either a tension and/or shear load application.
3. Locate the embedment (E) at which the anchor is to be installed.
4. Locate the end or edge distance (C_{act}) or spacing (S_{act}) at which the anchor is to be installed.
5. The load-adjustment factor (f_c or f_s) is the intersection of the row and column.
6. Multiply the allowable load by the applicable load-adjustment factor.
7. Reduction factors for multiple edges or spacing are multiplied together.
8. Adjustment factors do not apply to allowable steel strength values.
9. Adjustment factors are to be applied to allowable Tension or Shear Load Based on CMU Strength values only.

End Distance Tension (f_c)   *

C_{act} (in.)	Dia.	1/2	5/8	3/4
	E	4 1/4	5	6 3/4
	C_{cr}	17	20	27
	C_{min}	4	4	4
	f_{cmin}	1.00	0.84	0.54**
4		1.00	0.84	0.54
8		1.00	0.88	0.62
12		1.00	0.92	0.70
16		1.00	0.96	0.78
17		1.00	0.97	0.80
20			1.00	0.86
24				0.94
27				1.00

See Notes Below


Edge Distance Tension (f_c)   *

C_{act} (in.)	Dia.	1/2	5/8	3/4
	E	4 1/4	5	6 3/4
	C_{cr}	17	20	27
	C_{min}	4	4	4
	f_{cmin}	1.00	0.84	0.54**
4		1.00	0.84	0.54
8		1.00	0.88	0.62
12		1.00	0.92	0.70
16		1.00	0.96	0.78
17		1.00	0.97	0.80
20			1.00	0.86
24				0.94
27				1.00

See Notes Below

*See page 10 for an explanation of the load table icons

**The allowable tension load reduction factor is permitted to equal 1.0 provided both of the following conditions are met:
(a) The anchor is installed with a minimum end distance, C_{min} , between 4 inches and 8 inches; and (b) a masonry return wall of identical construction is on the opposite side (such as two masonry walls intersecting at a building corner).

End and Edge Distance Shear (f_c) Shear Load Perpendicular to End or Edge   *

C_{act} (in.)	Dia.	1/2	5/8	3/4
	E	4 1/4	5	6 3/4
	C_{cr}	17	20	27
	C_{min}	4	4	4
	f_{cmin}	0.43	0.25	0.25
4		0.43	0.25	0.25
8		0.61	0.44	0.38
12		0.78	0.63	0.51
16		0.96	0.81	0.64
17		1.00	0.86	0.67
20			1.00	0.77
24				0.90
27				1.00

End and Edge Distance Shear (f_c) Shear Load Parallel to End or Edge   *

C_{act} (in.)	Dia.	1/2	5/8	3/4
	E	4 1/4	5	6 3/4
	C_{cr}	17	20	27
	C_{min}	4	4	4
	f_{cmin}	0.95	0.51	0.45
4		0.95	0.51	0.45
8		0.97	0.63	0.55
12		0.98	0.76	0.64
16		1.00	0.88	0.74
17		1.00	0.91	0.76
20			1.00	0.83
24				0.93
27				1.00

1. E = Embedment depth (inches).
2. C_{act} = actual end or edge distance at which anchor is installed (inches).
3. C_{cr} = critical end or edge distance for 100% load (inches).
4. C_{min} = minimum end or edge distance for reduced load (inches).
5. f_c = adjustment factor for allowable load at actual end or edge distance.
6. f_{ccr} = adjustment factor for allowable load at critical end or edge distance. f_{ccr} is always = 1.00.
7. f_{cmin} = adjustment factor for allowable load at minimum end or edge distance.
8. $f_c = f_{cmin} + [(1 - f_{cmin})(C_{act} - C_{min}) / (C_{cr} - C_{min})]$.

Spacing Tension (f_s)   *

S_{act} (in.)	Dia.	1/2	5/8	3/4
	E	4 1/4	5	6 3/4
	S_{cr}	17	20	27
	S_{min}	8	8	8
	f_{smin}	0.89	0.81	0.59
8		0.89	0.81	0.59
12		0.94	0.87	0.68
16		0.99	0.94	0.76
17		1.00	0.95	0.78
20			1.00	0.85
24				0.94
27				1.00

Spacing Shear (f_s)   *

S_{act} (in.)	Dia.	1/2	5/8	3/4
	E	4 1/4	5	6 3/4
	S_{cr}	17	20	27
	S_{min}	8	8	8
	f_{smin}	1.00	1.00	1.00
8		1.00 for all spacing \geq 8 in.		
12				
16				
17				
20				
24				
27				

1. E = Embedment depth (inches).
2. S_{act} = actual spacing distance at which anchors are installed (inches).
3. S_{cr} = critical spacing distance for 100% load (inches).
4. S_{min} = minimum spacing distance for reduced load (inches).
5. f_s = adjustment factor for allowable load at actual spacing distance.
6. $f_{s cr}$ = adjustment factor for allowable load at critical spacing distance. $f_{s cr}$ is always = 1.00.
7. $f_{s min}$ = adjustment factor for allowable load at minimum spacing distance.
8. $f_s = f_{s min} + [(1 - f_{s min})(S_{act} - S_{min}) / (S_{cr} - S_{min})]$.