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HIGH-PERFORMANCE ANCHORS®

Inject-TITE™ FS™ Fast-Set

Product Description

Inject-TITE FS is a 2-component, 1:1 mix ratio, structural epoxy system that offers exceptional strength in anchoring and doweling applications and can be used in temperatures from 40 °F to 110 °F (4 °C to 43 °C). Inject-TITE FS in cartridges has been tested in accordance with ASTM E488 and ASTM E1512 for its capability to resist static, dynamic, seismic and wind loads in uncracked concrete for both threaded rod and rebar.

General Uses & Applications

- Anchoring threaded rods, bolts and rebar dowels into uncracked concrete
- Short and long term tensile anchoring, including wind, seismic and shear forces in accordance with allowable stress design (ASD)
- Grouting dowel bars and tie bars for full depth concrete pavement repairs
- Bonding agent for fresh to hardened concrete, and hardened to hardened concrete

Advantages & Features

- Available in numerous cartridge sizes and in bulk
- Moisture insensitive allowing installation and curing in damp environments
- Withstands freeze-thaw conditions
- Little or no odor
- High modulus
- In-service temperature range between 35 °F (2 °C) and 180 °F (82 °C)

Availability: Wej-It products are available through select distributors providing all your construction needs. Please contact Wej-It High Performance Anchors for a distributor near you.

Standards & Approvals

ASTM C881-14
Type I, II, IV & V Grade 3
Class A, B & C

AASHTO M235

Color & Ratio: Part A (Resin): White, Part B (Hardener): Black, Mixed: Concrete Gray, Mix Ratio: 1:1

Storage & Shelf Life: 28 months when stored in unopened containers in dry conditions. Store between 40 °F (4 °C) and 95 °F (35 °C).

Installation: Manufacturer's Printed Installation Instruc-tions (MPII) are available within this Technical Data Sheet (TDS). Due to occasional updates and revisions, always verify that you are using the most current version of the MPII. In order to achieve maximum results, proper installation is imper-ative.

Clean Up: Always wear appropriate protective equipment such as safety glasses and gloves during cleanup. Cured ma-terial can only be removed mechanically.

Limitations & Warnings:

- Do not thin with solvents, as this may affect cure
- Not recommended for any overhead application where there may be a sustained tensile load
- For anchoring applications, concrete must be a minimum of 21 days old prior to anchor installation
- Performance characteristics, such as seismic and long term load resistance, were tested in accordance with ASTM E488-96 (2003) & E1512-01 (2015) provisions and not that of ACI 355.4, and are therefore not applicable in the concrete tension zone - always consult with a design professional prior to use to ensure product applicability
- Smooth bulk formulation has not been tested to ASTM E488 or ASTM E1512

Safety: Please refer to the Safety Data Sheet (SDS) for Inject-TITE FS published on our website or call Wej-It High Performance Anchors for more information at 1-203-857-2200.

Specification: Anchoring adhesive shall be a two compo-nent, 1:1 ratio, solvent free epoxy system supplied in pre-measured containers. The epoxy must meet the requirements of C881-14 specification for Type I, II, IV, and V, Grade 3 Class A, B & C. After a 7 day cure and at a temperature of 75 °F (24 °C), the anchoring adhesive shall have a compres-sive yield strength of 11,410 psi (78.7 MPa) per ASTM D695. The anchoring adhesive shall have a heat deflection tempera-ture of 132 °F (56 °C) per ASTM D648. The shelf life shall be a minimum of 28 months. The anchoring adhesive shall be Inject-TITE FS from Wej-It High Performance Anchors. Anchors shall be installed per the Manufacturer's Printed Installation Instructions (MPII) for Inject-TITE FS anchoring epoxy.

ORDERING INFORMATION

TABLE 1: Inject-TITE FS Adhesive, Dispensing Tools and Mixing Nozzles

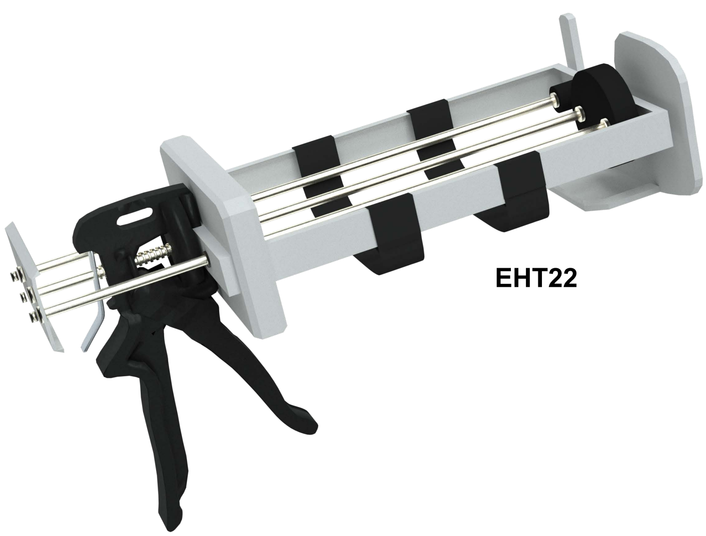
Package Size	**8.6 fl.oz.. (254 ml) Cartridge**	**21.2 fl.oz.. (627 ml) Cartridge**
Part #	EFS10	EFS21
Manual Dispensing Tool	EHT10	EHT22
Case Qty.	12	12
Recommended Mixing Nozzle	ECTNZ12	ECTNZ12

* Each adhesive tube is supplied with one mixing nozzle

8.6 fl.oz
EFS10

EHT10

21.2 fl.oz
EFS21



EHT22

MATERIAL SPECIFICATION

TABLE 3: Inject-TITE FS performance to **ASTM C881-14**[1,2,3]

Property	Cure Time	ASTM Standard	Units	Sample Conditioning Temperature Class A 38 °F (3) °C	Class B 50 °F (10) °C	Class C 75 °F (24) °C
Gel Time - 60 Gram Mass[4]	----	C881	min	38	20	14
Pot Life[5,6]	----	----	min	13		
Compressive Yield Strength	7 day	D695	psi (MPa)	10,860 (74.9)	10,490 (72.3)	11,410 (78.7)
Compressive Modulus	7 day	D695	psi (MPa)	209,000 (1,441.0)	211,000 (1,454.8)	244,000 (1,682.3)
Bond Strength	2 day	C882	psi (MPa)	2,850 (19.7)	3,300 (22.8)	3,580 (24.7)
Bond Strength	14 day	C882	psi (MPa)	2,790 (19.2)	4,090 (28.2)	3,940 (27.2)
Consistency or Viscosity	----	C881	----	Non-sag		
Heat Deflection Temperature	7 day	D648	°F (°C)	132 (55.6)		
Water Absorption	14 day	D570	%	0.53		
Linear Coefficient of Shrinkage	----	D2566	%	0.002		

1. Results based on testing conducted on a representative lot(s) of product. Average results will vary according to the tolerances of the given property.
2. Full cure is listed above to obtain the given properties for each product characteristic.
3. Results may vary due to environmental factors such as temperature, moisture and type of substrate.
4. Gel time may be lower than the minimum required for ASTM C881.
5. Property not referenced in ASTM C881.
6. Pot life is measured as the workable and applicable time of 1.0 gallon (3.8 L) when mixed at 75 °F (24 °C).

TABLE 4: Inject-TITE FS **CURE SCHEDULE**[1,2,3]

Base Material Temperature °F (°C)	Working Time	Full Cure Time
40 (4)	36 min	72 hr
75 (24)	20 min	24 hr
110 (43)	12 min	18 hr

1. Working and full cure times are approximate, may be linearly interpolated between listed temperatures and are based on cartridge/ nozzle system performance.
2. Application Temperature: Substrate and ambient air temperature should be from 40 - 110 °F (4 - 43 °C).
3. When ambient or base material temperature falls below 70 °F (21 °C), condition the adhesive to 70 - 75 °F (21 - 24 °C) prior to use.

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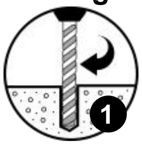
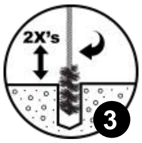
INSTALLATION INSTRUCTIONS (MPII)

Drilling and Cleaning



Using a rotary hammer drill, and a bit which conforms to ANSI B212.15 and is the appropriate size for the anchor diameter to be installed, drill the hole to the specified embedment depth. **CAUTION:** Always wear appropriate personal protection equipment (PPE) for eyes, ears & skin and avoid inhalation of dust during the drilling and cleaning process. Refer to the Safety Data Sheet (SDS) for details prior to proceeding.

NOTE: Remove any standing water from hole prior to beginning the cleaning process. If removal of standing water is not possible, please contact Wej-It High Performance Afor application specific installation instructions. Using oil free compressed air with a minimum pressure of 80 psi (5.5 bar), insert the air wand to the bottom of the drilled hole and blow out the debris with an up/down motion for a minimum of 4 seconds/cycles (4X).

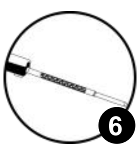


Select the correct wire brush size for the drilled hole diameter (see Table 2), making sure that the brush is long enough to reach the bottom of the drilled hole. Reaching the bottom of the hole, brush in an up/down and twist-ing motion for 4 cycles (4X). CAUTION: The brush should contact the walls of the hole. If it does not, the brush is either too worn or small and should be replaced with a new brush of the correct diameter.

Blow the hole out once more to remove brush debris using oil free compressed air with a minimum pressure of 80 psi (5.5 bar). Insert the air wand to the bottom of the drilled hole and blow out the debris with an up/down motion for a minimum of 4 seconds/cycles (4X). Visually inspect the hole to confirm it is clean. NOTE: If installa-tion will be delayed for any reason, cover cleaned holes to prevent contamination.

Cartridge Preparation

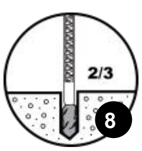
CAUTION: Check the expiration date on the cartridge to ensure it is not expired. **Do not use expired product!** Remove the protective cap from the adhesive cartridge and insert the cartridge into the recom-mended dispensing tool. Before attaching mixing nozzle, balance the cartridge by dispensing a small amount of material until both components are flowing evenly. For a cleaner environment, hand mix the two components and let cure prior to disposal in accordance with local regulations.



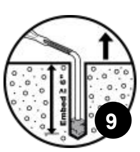
Only after the cartridge has been balanced, screw on the proper Wej-It mixing nozzle to the cartridge (see Table 1). Do not modify mixing nozzle and confirm that internal mixing element is in place prior to dispensing adhesive. Take note of the air and base material temperatures and review the working/full cure time chart (see Table 4) prior to starting the injection process.

Dispense the initial amount of material from the mixing nozzle onto a disposable surface until the product is a uniform gray color with no streaks, as adhesive must be properly mixed in order to perform as published. Dis-pose of the initial amount of adhesive according to local regulations prior to injection into the drill hole. **CAU-TION:** When changing cartridges, never re-use nozzles. A new nozzle should be used with each new car-tridge and steps 5-7 should be repeated accordingly.

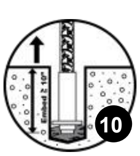
Installation and Curing (Vertical Down and Horizontal)



NOTE: The engineering drawings must be followed. For any applications not covered by this docu-ment, or if there are any installation questions, please contact Wej-It. Insert the mixing nozzle to the bottom of the hole and fill from the bottom to the top approximately two-thirds full, being careful not to withdraw the nozzle too quickly as this may trap air in the adhesive. **NOTE:** When using a pneu-matic dispensing tool, ensure that pressure is set at 90 psi (6.2 bar) maximum.



Do not disturb, torque or apply any load to the installed anchor until the specified full cure time has passed. The amount of time needed to reach full cure is base material temperature dependent - refer to Table 4 for appropri-ate full cure time.



Prior to inserting the threaded rod or rebar into the hole, make sure it is clean and free of oil and dirt and that the necessary embedment depth is marked on the anchor element. Insert the anchor element into the hole while turning 1-2 rotations prior to the anchor reaching the bottom of the hole. Excess adhesive should be visible on all sides of the fully installed anchor. For horizontal installations, wedges should be used to center and support the anchor while the adhesive is curing. CAUTION: Use extra care with deep embedment or high temperature installations to ensure that the working time has not elapsed prior to the anchor being fully installed

TECHNICAL DATA

TABLE 5: Inject-TITE FS **IN-SERVICE CHART**[1]

Base Material Temperature °F (°C)	Allowable Load Capacity Reduction Factor
35 (2)	1.00
70 (21)	1.00
110 (43)	0.91
135 (57)	0.80
150 (66)	0.80
180 (82)	0.66

1. Reduction factors may be linearly interpolated between listed temperatures.

TABLE 6: Inject-TITE FS ultimate and allowable **TENSION** loads for **THREADED ROD** in normal-weight concrete[1,2,3]

Threaded Rod Diameter in.	Nominal Drill Bit Diameter in.	Embedment Depth in. (mm)	Tension Load Based on Bond Strength/Concrete Capacity				Allowable Tension Load Based on Steel Strength[4]		
			$f'_c \geq$ 2,000 psi (13.8 MPa)[5]		$f'_c \geq$ 4,000 psi (27.6 MPa)[5]		ASTM F1554 Grade 36 lbs. (kN)	ASTM A193 Grade B7 lbs. (kN)	ASTM F593 304/316 SS lbs. (kN)
			Ultimate lbs. (kN)	Allowable lbs. (kN)	Ultimate lbs. (kN)	Allowable lbs. (kN)			
3/8	7/16	3 3/8 (86)	9,248 (41.1)	2,312 (10.3)	9,248 (41.1)	2,312 (10.3)	2,114 (9.4)	4,556 (20.3)	3,645 (16.2)
1/2	9/16	4 1/2 (114)	17,076 (76.0)	4,269 (19.0)	22,328 (99.3)	5,582 (24.8)	3,758 (16.7)	8,099 (36.0)	6,480 (28.8)
5/8	3/4	5 5/8 (143)	23,865 (106.2)	5,966 (26.5)	29,950 (133.2)	7,488 (33.3)	5,872 (26.1)	12,655 (56.3)	10,124 (45.0)
3/4	7/8	6 3/4 (171)	31,371 (139.5)	7,843 (34.9)	39,278 (174.7)	9,820 (43.7)	8,456 (37.6)	18,224 (81.1)	12,392 (55.1)
7/8	1	7 7/8 (200)	39,532 (175.8)	9,883 (44.0)	53,862 (239.6)	13,466 (59.9)	11,509 (51.2)	24,804 (110.3)	16,867 (75.0)
1	1 1/8	9 (229)	48,299 (214.8)	12,075 (53.7)	62,697 (278.9)	15,674 (69.7)	15,033 (66.9)	32,398 (144.1)	22,030 (98.0)
1 1/4	1 3/8	11 1/4 (286)	67,500 (300.3)	16,875 (75.1)	88,594 (394.1)	22,149 (98.5)	23,488 (104.5)	50,621 (225.2)	34,423 (153.1)

1. Allowable bond strength/concrete capacity was calculated using a safety factor of 4.0.
2. Load adjustment factors for edge distance, spacing distance and in-service temperature should be applied if applicable.
3. The lower value of either the adjusted allowable bond strength/concrete capacity or steel strength should be used as the allowable tension value for design.
4. Allowable steel strengths calculated in accordance with AISC Manual of Steel Construction: Tensile = $0.33 * F_u * A_{nom}$.
5. Linear interpolation may be used for intermediate concrete compressive strengths.

TECHNICAL DATA

TABLE 7: Inject-TITE FS ultimate and allowable **SHEAR** loads for **THREADED ROD** in normal-weight concrete[1,2,3]

Threaded Rod Diameter in.	Nominal Drill Bit Diameter in.	Embedment Depth in. (mm)	Shear Load Based on Bond Strength/Concrete Capacity		Allowable Shear Load Based on Steel Strength[4]		
			f'c ≥ 2,000 psi (13.8 MPa)		ASTM F1554 Grade 36 lbs. (kN)	ASTM A193 Grade B7 lbs. (kN)	ASTM F593 304/316 SS lbs. (kN)
			Ultimate lbs. (kN)	Allowable lbs. (kN)			
3/8	7/16	3 3/8 (86)	7,189 (32.0)	1,797 (8.0)	1,089 (4.8)	2,347 (10.4)	1,878 (8.4)
1/2	9/16	4 1/2 (114)	12,863 (57.2)	3,216 (14.3)	1,936 (8.6)	4,172 (18.6)	3,338 (14.8)
5/8	3/4	5 5/8 (143)	22,855 (101.7)	5,714 (25.4)	3,025 (13.5)	6,519 (29.0)	5,216 (23.2)
3/4	7/8	6 3/4 (171)	32,304 (143.7)	8,076 (35.9)	4,356 (19.4)	9,388 (41.8)	6,384 (28.4)
7/8	1	7 7/8 (200)	36,214 (161.1)	9,054 (40.3)	5,929 (26.4)	12,778 (56.8)	8,689 (38.7)
1	1 1/8	9 (229)	52,151 (232.0)	13,038 (58.0)	7,744 (34.4)	16,690 (74.2)	11,349 (50.5)
1 1/4	1 3/8	11 1/4 (286)	69,011 (307.0)	17,253 (76.7)	12,100 (53.8)	26,078 (116.0)	17,733 (78.9)

1. Allowable bond strength/concrete capacity was calculated using a safety factor of 4.0.
2. Load adjustment factors for edge distance, spacing distance and in-service temperature should be applied if applicable.
3. The lower value of either the adjusted allowable bond strength/concrete capacity or steel strength should be used as the allowable shear value for design.
4. Allowable steel strengths calculated in accordance with AISC Manual of Steel Construction: Shear = $0.17*F_u*A_{nom}$.

TABLE 8: Inject-TITE FS ultimate and allowable **TENSION & SHEAR** loads for **REBAR** in normal-weight concrete[1,2,3]

Rebar Size	Nominal Drill Bit Diameter in.	Embedment Depth in. (mm)	Tension Load Based on Bond Strength/Concrete Capacity		Shear Load Based on Bond Strength/Concrete Capacity		Allowable Load Based on Steel Strength[4]			
			f'c ≥ 2,000 psi (13.8 MPa)		f'c ≥ 2,000 psi (13.8 MPa)		Tension		Shear	
			Ultimate lbs. (kN)	Allowable lbs. (kN)	Ultimate lbs. (kN)	Allowable lbs. (kN)	ASTM A615 Grade 60 lbs. (kN)	ASTM A615 Grade 75 lbs. (kN)	ASTM A615 Grade 60 lbs. (kN)	ASTM A615 Grade 75 lbs. (kN)
#4	5/8	4 1/2 (114)	17,076 (76.0)	4,269 (19.0)	11,240 (50.0)	2,810 (12.5)	4,800 (21.4)	6,000 (26.7)	3,060 (13.6)	3,400 (15.1)
#5	3/4	5 5/8 (143)	23,865 (106.2)	5,966 (26.5)	21,024 (93.5)	5,256 (23.4)	7,440 (33.1)	9,300 (41.4)	4,743 (21.1)	5,270 (23.4)
#6	7/8	6 3/4 (171)	31,371 (139.5)	7,843 (34.9)	32,288 (143.6)	8,072 (35.9)	10,560 (47.0)	13,200 (58.7)	6,732 (29.9)	7,480 (33.3)
#7[5]	1	7 7/8 (200)	39,835 (177.2)	9,959 (44.3)	35,434 (157.6)	8,859 (39.4)	14,400 (64.1)	18,000 (80.1)	9,180 (40.8)	10,200 (45.4)
#8	1 1/8	9 (229)	48,299 (214.8)	12,075 (53.7)	38,580 (171.6)	9,645 (42.9)	18,960 (84.3)	23,700 (105.4)	12,087 (53.8)	13,430 (59.7)

1. Allowable bond strength/concrete capacity was calculated using a safety factor of 4.0.
2. Load adjustment factors for edge distance, spacing distance and in-service temperature should be applied if applicable.
3. The lower value of either the adjusted allowable bond strength/concrete capacity or steel strength should be used as the allowable tension or shear value for design.
4. Allowable steel strengths calculated in accordance with AISC Manual of Steel Construction: Tensile = $(F_y*A_{nom})/2.5$, Shear = $0.17*F_u*A_{nom}$.
5. Values for bond strength of #7 rebar were linearly interpolated from #6 & #8 data.

TECHNICAL DATA

TABLE 9: Inject-TITE FS reduction factors for **EDGE DISTANCE** in **TENSION**[1,2]

Diameter	in.	3/8	1/2	5/8	3/4	7/8	1	1 1/4
Embedment Depth	in. (mm)	3 3/8 (86)	4 1/2 (114)	5 5/8 (143)	6 3/4 (171)	7 7/8 (200)	9 (229)	11 1/4 (286)
Critical Edge Distance	in. (mm)	5 1/4 (133)	6 3/4 (171)	8 1/2 (216)	10 1/4 (260)	11 3/4 (298)	13 1/2 (343)	17 (432)
Min. Edge Distance	in. (mm)	1 3/4 (44)	2 1/4 (57)	2 3/4 (70)	3 1/2 (89)	4 (102)	4 1/2 (114)	5 3/4 (146)
Edge Distance		Allowable Load Capacity Reduction Factor						
in.	(mm)							
1 3/4	(44.5)	0.63						
2 1/4	(57.2)	0.68	0.64					
2 3/4	(69.9)	0.73	0.68	0.66				
3	(76.2)	0.76	0.70	0.67				
3 1/2	(88.9)	0.81	0.74	0.70	0.67			
4	(101.6)	0.87	0.78	0.73	0.70	0.71		
4 1/2	(114.3)	0.92	0.82	0.76	0.72	0.73	0.74	
5	(127.0)	0.97	0.86	0.79	0.75	0.75	0.75	
5 1/4	(133.4)	1.00	0.88	0.81	0.76	0.75	0.76	
5 3/4	(146.1)		0.92	0.84	0.78	0.77	0.78	0.77
6 1/4	(158.8)		0.96	0.87	0.81	0.79	0.79	0.78
6 3/4	(171.5)		1.00	0.90	0.83	0.81	0.81	0.79
7 1/2	(190.5)			0.94	0.87	0.84	0.83	0.81
8 1/2	(215.9)			1.00	0.92	0.88	0.86	0.83
9 1/2	(241.3)				0.96	0.92	0.88	0.85
10 1/4	(260.4)				1.00	0.94	0.91	0.86
11	(279.4)					0.97	0.93	0.88
11 3/4	(298.5)					1.00	0.95	0.89
12 1/2	(317.5)						0.97	0.91
13 1/2	(342.9)						1.00	0.93
15	(381.0)							0.96
16	(406.4)							0.98
17	(431.8)							1.00

1. Minimum slab thickness equals 1.5 x embedment depth.
2. Linear interpolation may be used for intermediate edge distances.

TABLE 10: Inject-TITE FS reduction factors for **EDGE DISTANCE** in **SHEAR**[1,2]

Diameter	in.	3/8	1/2	5/8	3/4	7/8	1	1 1/4
Embedment Depth	in. (mm)	3 3/8 (86)	4 1/2 (114)	5 5/8 (143)	6 3/4 (171)	7 7/8 (200)	9 (229)	11 1/4 (286)
Critical Edge Distance	in. (mm)	5 1/4 (133)	6 3/4 (171)	8 1/2 (216)	10 1/4 (260)	11 3/4 (298)	13 1/2 (343)	17 (432)
Min. Edge Distance	in. (mm)	1 3/4 (44)	2 1/4 (57)	2 3/4 (70)	3 1/2 (89)	4 (102)	4 1/2 (114)	5 3/4 (146)
Edge Distance		Allowable Load Capacity Reduction Factor						
in.	(mm)							
1 3/4	(44.5)	0.31						
2 1/4	(57.2)	0.41	0.29					
2 3/4	(69.9)	0.51	0.37	0.28				
3	(76.2)	0.56	0.41	0.31				
3 1/2	(88.9)	0.66	0.49	0.37	0.26			
4	(101.6)	0.75	0.57	0.44	0.32	0.26		
4 1/2	(114.3)	0.85	0.65	0.50	0.37	0.31	0.26	
5	(127.0)	0.95	0.73	0.56	0.43	0.35	0.30	
5 1/4	(133.4)	1.00	0.76	0.59	0.45	0.38	0.32	
5 3/4	(146.1)		0.84	0.65	0.51	0.43	0.36	0.25
6 1/4	(158.8)		0.92	0.72	0.56	0.47	0.40	0.29
6 3/4	(171.5)		1.00	0.78	0.62	0.52	0.44	0.32
7 1/2	(190.5)			0.87	0.70	0.59	0.50	0.37
8 1/2	(215.9)			1.00	0.81	0.69	0.59	0.44
9 1/2	(241.3)				0.92	0.78	0.67	0.50
10 1/4	(260.4)				1.00	0.86	0.73	0.55
11	(279.4)					0.93	0.79	0.60
11 3/4	(298.5)					1.00	0.86	0.65
12 1/2	(317.5)						0.92	0.70
13 1/2	(342.9)						1.00	0.77
15	(381.0)							0.87
16	(406.4)							0.93
17	(431.8)							1.00

1. Minimum slab thickness equals 1.5 x embedment depth.
2. Linear interpolation may be used for intermediate edge distances.

TECHNICAL DATA

TABLE 11: Inject-TITE FS reduction factors for **SPACING DISTANCE** in **TENSION**[1,2]

Diameter	**in.**	**3/8**	**1/2**	**5/8**	**3/4**	**7/8**	**1**	**1 1/4**
Embedment Depth	**in.** (**mm**)	**3 3/8** (86)	**4 1/2** (114)	**5 5/8** (143)	**6 3/4** (171)	**7 7/8** (200)	**9** (229)	**11 1/4** (286)
Critical Spacing Distance	**in.** (**mm**)	**6** (152)	**7 7/8** (200)	**9 7/8** (251)	**11 7/8** (302)	**13 7/8** (352)	**15 3/4** (400)	**19 3/4** (502)
Min. Spacing Distance	**in.** (**mm**)	**1 3/4** (44)	**2 1/4** (57)	**2 3/4** (70)	**3 3/8** (86)	**4** (102)	**4 1/2** (114)	**5 5/8** (143)
Spacing Distance		**Allowable Load Capacity Reduction Factor**						
in.	**(mm)**							
1 3/4	(44.5)	0.69						
2 1/4	(57.2)	0.73	0.69					
2 3/4	(69.9)	0.76	0.72	0.69				
3	(76.2)	0.78	0.73	0.70				
3 3/8	(85.7)	0.81	0.75	0.72	0.69			
4	(101.6)	0.85	0.79	0.74	0.71	0.69		
4 1/2	(114.3)	0.89	0.81	0.77	0.73	0.71	0.69	
5 5/8	(142.9)	0.97	0.88	0.82	0.77	0.74	0.72	0.69
6	(152.4)	1.00	0.90	0.83	0.79	0.75	0.73	0.70
6 1/2	(165.1)		0.92	0.85	0.80	0.77	0.75	0.71
7 1/4	(184.2)		0.97	0.89	0.83	0.79	0.77	0.73
7 7/8	(200.0)		1.00	0.91	0.85	0.81	0.78	0.74
8 1/2	(215.9)			0.94	0.88	0.83	0.80	0.75
9 7/8	(250.8)			1.00	0.93	0.87	0.84	0.78
10 1/2	(266.7)				0.95	0.89	0.86	0.80
11 7/8	(301.6)				1.00	0.94	0.89	0.83
12 1/2	(317.5)					0.96	0.91	0.84
13 7/8	(352.4)					1.00	0.95	0.87
14 1/2	(368.3)						0.97	0.88
15 3/4	(400.1)						1.00	0.91
17	(431.8)							0.94
18 1/2	(469.9)							0.97
19 3/4	(501.7)							1.00

1. Minimum slab thickness equals 1.5 x embedment depth.
2. Linear interpolation may be used for intermediate spacing distances.

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