QUICKTIE™ EPOXY – QE-1

PRODUCT FEATURES:

QuickTie™ QE-1 adhesives are an injectable two-component adhesive, tested to meet IBC requirements for both cracked and uncracked concrete applications. QE-1 adhesives are used for multiple anchoring systems, including QuickTie™ cables, fractional and metric threaded rod and rebar applications.

CODE COMPLIANCE:

ICC-ESR 4467

Part No.	Description	Standard Box Package
QE-1*	Quick Set Anchoring Epoxy - 19.8 oz	6
QE-1TL**	High Performance Manual Tool (19.8 oz)	1
1BSH	Epoxy Hole Cleanout Brush	1

* One mixing nozzle is packaged with each cartridge. QE-1 & QE-2 mixing nozzles must be used to ensure complete and proper mixing of the adhesive.

** For pneumatic or cordless, battery operated dispensing tools, contact QuickTie™ for ordering information.



ESR-4467
(QE-1 Adhesive Anchoring System)



QE-1 (19.8 OZ.)



QE-1TL (19.8 OZ.)



1BSH



QE-1 NOZZLE

QE-1 STRENGTH DESIGN AND ALLOWABLE STRESS DESIGN TENSION VALUES FOR THREADED RODS[1-8]

Rod Diameter, D (in.)	Slab Thickness, h_a (in.)	Embed Depth, h_{ef} (in.)	End Distance, c_{a2} (in.)	Critical Edge Distance, c_{ac} (in.)	Concrete	ALLOWABLE TENSION (LB) - 2,500 PSI CONCRETE												
						At Edge Distance, c_{a1}												
						1-3/4"	2"	2-1/4"	2-1/2"	2-3/4"	3"	3-1/4"	3-1/2"	3-3/4"	4"	5"	6"	C_{ac}
3/8	12	4	7	7-1/8	Cracked (SD)	1,640	1,720	1,805	1,895	1,980	2,070	2,160	2,255	2,350	2,450	2,855	3,185	3,185
					Uncracked (SD)	2,675	2,805	2,935	3,075	3,210	3,350	3,495	3,645	3,790	3,945	4,580	5,260	6,240
					Uncracked (ASD)	1,650	1,730	1,810	1,895	1,980	2,065	2,155	2,250	2,335	2,435	2,825	3,245	3,850
1/2	12	4	7	6-3/8	Cracked (SD)	-	-	2,125	2,210	2,295	2,380	2,470	2,555	2,645	2,740	3,120	3,520	3,665
					Uncracked (SD)	-	-	3,295	3,450	3,605	3,760	3,925	4,085	4,255	4,425	5,140	5,900	6,240
					Uncracked (ASD)	-	-	2,030	2,125	2,225	2,320	2,420	2,520	2,625	2,730	3,170	3,640	3,850
5/8	18	6-5/8	7	10-5/8	Cracked (SD)	-	-	-	3,895	4,010	4,130	4,250	4,370	4,495	4,620	5,130	5,670	8,305
					Uncracked (SD)	-	-	-	5,140	5,295	5,450	5,610	5,770	5,935	6,100	6,775	7,485	11,725
					Uncracked (ASD)	-	-	-	3,170	3,265	3,360	3,460	3,560	3,660	3,765	4,180	4,620	7,235
3/4	24	8-1/8	7	12-5/8	Cracked (SD)	-	-	-	-	-	4,855	4,975	5,095	5,215	5,340	5,845	6,370	10,250
					Uncracked (SD)	-	-	-	-	-	6,620	6,780	6,945	7,110	7,280	7,965	8,685	14,470
					Uncracked (ASD)	-	-	-	-	-	4,085	4,185	4,285	4,385	4,490	4,915	5,360	8,930

NOTES:

1. QE-1 has an installation temperature range of 5° F to 104° F for structural applications.
2. All Strength Design (SD) values listed are controlled by bond strength.
3. Table represents performance at specific edge distance, hole diameter and embedment depth conditions.
4. Table values reflect reduction for use in a Condition B application, where supplementary reinforcement is not present.
5. Allowable tension loads calculated based on strength design provisions of IBC Section 1605.2 with the following assumptions:
   a. Temperature range A: Maximum short term temperature = 176° F (80° C), Maximum long term temperature = 122° F (50° C)
   b. f'_c = 2,500 psi, normal-weight concrete.
   c. Single anchor, vertically down with periodic special inspection and no seismic loading.
   d. ϕ_d = 0.65 for dry concrete, with ASTM A193, Grade B7 threaded rod.
6. For short term temperature exposure greater than 176° F (80° C) and up to 248° F (120° C), apply a reduction factor of 0.90 to the allowable tension load.
7. For short term temperature exposure greater than 248° F (120° C) and up to 302° F (150° C), apply a reduction factor of 0.80 to the allowable tension load.
8. Allowable Stress Design (ASD) loads based on ACI load combination - 0.9D + W / 0.6D + 0.6W, assuming dead load of 30% and wind load of 70% giving a weighted average (α) of 1.62.