

ANCHOR SYSTEMS – SET/ET/AT HIGH STRENGTH EPOXIES

Request our Anchor Systems Catalog for complete information.

Simpson Strong-Tie now offers two types of high-strength adhesive anchoring cartridge systems. Epoxy-Tie adhesives are two-component, low-odor, 1:1 ratio, 100% solids epoxy based adhesives. Simpson's new Acrylic-Tie is a two-component, 10:1 ratio, acrylic based adhesive. Acrylic-Tie's innovative chemistry allows easy dispensing, cure at temperatures down to 0° F, as well as fast cure at temperatures at or above 40° F. Both systems feature simultaneous dispensing of resin and hardener/initiator through a static mixing nozzle.

APPLICATION: • Surfaces to receive adhesive should be clean.

- Adhesives should not be installed in or through standing water.
- For dependable results, Acrylic-Tie should be applied to dry surfaces.
- For epoxy products, the base material temperature must be 40° F or above at the time of application. For best results the adhesive should be 70-80° F at the time of application.
- For Acrylic-Tie the base material must be 0° or above at the time of installation.
- To warm cold epoxy cartridges before use, place them in a uniformly heated area for a sufficient time to allow epoxy to warm completely. Do not immerse the cartridges in water to facilitate warming.
- Mixed epoxy material in the nozzle can harden in 7-10 minutes at 40° F. Mixed acrylic material can harden in the nozzle in 5-7 minutes.

INSTALLATION (Epoxy-Tie and Acrylic-Tie): • Drill hole to specified diameter and depth.

- Remove dust from the hole with oil-free compressed air. Clean with nylon brush and blow out remaining dust. Dust left in the hole will reduce the adhesive's holding capacity.
- Before using, dispense a bead of adhesive off to the side to check for proper mixing, indicated by a uniform gray color. Fill hole halfway, starting from the bottom of the hole to avoid air pockets. Withdraw nozzle as hole fills up.
- Anchors must be clean and oil-free. Insert anchor, turning slowly until the anchor hits the bottom of the hole. Do not disturb while setting.

CODES: • ICBO ER-5279 (SET); ER-4945 (ET); City of L.A. RR 25279 (SET); RR 25185 and RR 25120 (ET); SBCCI 9706 (SET); 94145 (ET); Dade Co., FL. 96-0730.04 (SET & ET); AT code reports pending.

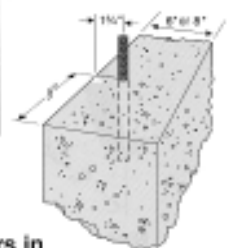
Cure Time

Concrete Temp	0° F	25° F	40° F	60° F	80° F	100° F
AT	24 hrs	8 hrs	4 hrs	1 hr	25 min	20 min
SET	—	—	72 hrs	24 hrs	20 hrs	16 hrs
ET	—	—	72 hrs	24 hrs	24 hrs	12 hrs

Sill Plate Shear Loads Based on Concrete Strength

Stud Dia	Drill Bit Dia	Min Embed	Edge Dist	End Dist	Avg. UH Shear Load	Allow. Shear Load $F_c \geq 2000$ psi
Parallel to Plate						
½"	¾"	4¼"	1¾"	8¾"	6496	2125
¾"	1"	5"	1¾"	10"	8857	2215

1. The allowable load for the anchor will be the lesser of the wood bearing capacity or concrete strength.



STEEL PRODUCTS

Tension Loads for Threaded Rod Anchors in Concrete Foundation Stemwall Installation

Stud Dia	Drill Bit Dia	Min Embed	Min Wall Thickness	Min Edge Dist	Min End Dist	Avg UH Tension Load	Allowable Tension Load $F_c \geq 2000$ psi (100) (133)
SET							
¾"	1"	10"	6"	1¾"	5"	23000	5750 7665
1"	1 1/8"	15"	8"	1¾"	5"	33600	8400 11200
ET							
¾"	¾"	9 1/2"	6"	1¾"	5"	10720	2680 3565
		12"	6"	1¾"	5"	16160	4040 5375
		12 1/2"	8"	1¾"	5"	17000	4250 5650
1"	1"	15 1/2"	8"	1¾"	5"	23340	5835 7760

Edge and end distances for threaded rod in concrete stemwall corner installation

Loads in Solid Concrete

Rod Dia In.	ET/SET Drill Bit Dia In.	AT Drill Bit Dia In.	Embed Depth In.	Tension Load based on Bond Strength $F_c \geq 2000$ psi concrete				Lead based on Steel Strength A307 (SAE 1018)			
				SET		ET		AT			
				Ultimate lbs.	Allowable lbs.	Ultimate lbs.	Allowable lbs.	Ultimate lbs.	Allowable lbs.	Shear Allowable lbs.	Tension Allowable lbs.
¾"	¾"	¾"	1 1/4"	1900	475	—	—	—	—	2105	
			2 1/4"	—	1365	—	—	—	—		
			3 1/4"	10200	2550	8776	2195	8937	2235		1085
½"	¾"	¾"	2 1/4"	7216	1805	—	—	—	—	3750	
			2 3/4"	—	2575	—	—	—	—		
			3 1/4"	—	3500	—	—	—	—		
¾"	¾"	1 1/8"	4 1/4"	17700	4425	15368	3840	16868	4165	1930	
			2 1/2"	6780	1695	—	—	—	—	—	
			3 1/2"	—	3680	—	—	—	—	—	
¾"	¾"	1 1/8"	4 3/4"	—	5185	—	—	—	—	5875	
			5"	26700	6680	22876	5720	—	—		3025
			5 1/2"	—	—	—	—	26025	6505		—
¾"	¾"	1 1/8"	3 3/4"	15456	3865	—	—	—	—	8460	
			4 1/4"	—	6085	—	—	—	—		
			5 1/4"	—	8550	—	—	—	—		
¾"	¾"	1 1/8"	6 1/4"	—	9540	—	—	—	—	11500	
			6 3/4"	42100	10525	35460	8865	37616	9405		4360
			3 3/4"	19120	4780	—	—	—	—		—
¾"	1"	1"	5"	—	6960	—	—	—	—	15025	
			6 1/4"	—	9380	—	—	—	—		
			7"	—	10840	—	—	—	—		
1"	1 1/8"	1 1/8"	7 3/4"	49160	12290	43596	10900	42848	10710	5925	
			4 1/4"	20076	5020	—	—	—	—	—	
			5 1/4"	—	7795	—	—	—	—	—	
1"	1 1/8"	1 1/8"	7"	—	10570	—	—	—	—	15025	
			8"	—	12795	—	—	—	—		—
1"	1 1/8"	1 1/8"	9"	60060	15015	47332	11835	60504	15125	7740	

1. Allowable loads are based on a safety factor of 4.
2. Allowable load is the lesser of the load based on bond strength or steel strength.
3. Allowable loads can be increased 33% for earthquake or wind loading, no further increase allowed.
4. The anchors cannot be used to resist pullout forces in overhead and wall installations, unless proper consideration is given to fire conditions.
5. Reference Simpson Anchor Systems catalog for spacing and edge distance requirements.



22 & 56 oz ET



22 & 56 oz SET



8, 13 & 30 oz AT



SET-PAC™ 10 oz.