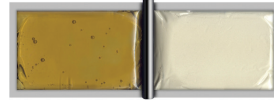


LIQUID ROC® 300 POUCH **AVAILABLE MATERIALS**

- Pouch – polyester resin base, benzoyl peroxide hardener
- Square-cut rods- A307 steel, zinc plated. Other sizes, materials and finishes available upon request

**FEATURES/ADVANTAGES**

- No dispensing tools needed
- Pre-measured adhesive
- No messy mixing
- Will cure below freezing
- Pourable consistency

CONCERNS

- Cannot be used in horizontal or overhead holes
- Must be used within 20 minutes after mixing
- 18 month shelf life
- For short term loading only

APPROVALS/LISTINGS

- Contact customer service for approvals/listings for state D.O.T.'s

CURE TIME

Concrete Temperature	Time	Concrete Temperature	Time
Over 80°F.	10-15 min.	48° to 38°F.	2 hrs.
80° to 68°F.	15-20 min.	38° to 28°F.	4 hrs.
68° to 58°F.	20-30 min.	28° to 18°F.	6 hrs.
58° to 48°F.	30-60 min.	Below 18°F.	24 hrs.

SQUARE CUT ROD

Order Code	Size	Box Quantity	Master Quantity
3106032	3/8" x 8"	10	50
3106048	3/8"x 12"	10	20
3108032	1/2"x 8"	10	50
3108048	1/2"x 12"	10	20
3110032	5/8"x 8"	10	50
3110048	5/8"x 12"	10	20
3112032	3/4"x 8"	10	50
3112048	3/4"x 12"	10	20

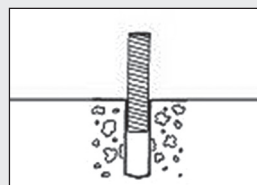
ORDER DETAILUltimate Tensile & Shear Loads in Lbs.*
Concrete Strength (P.S.I.)

Pouch Order Code	Square Cut Rod Order Code	Size	Hole Diameter	Minimum Embedment	3000 P.S.I. Tension	5000 P.S.I. Tension	Shear	Rod Box Quantity	Rod Master Quantity
7511008 5.5 fl. oz 5/Box	3106032	3/8" x 8"	7/16"	3-1/2"	6,925	8,008	3,780	10	50
	3106048	3/8" x 12"	7/16"	3-1/2"	6,925	8,008	3,780	10	20
	3108032	1/2" x 8"	9/16"	4-1/2"	10,650	11,319	6,840	10	50
	3108048	1/2" x 12"	9/16"	4-1/2"	10,650	11,319	6,840	10	20
	3110032	5/8" x 8"	11/16"	5-1/2"	19,225	20,125	11,570	10	50
	3110048	5/8" x 12"	11/16"	5-1/2"	19,225	20,125	11,570	10	20
	3112032	3/4" x 8"	7/8"	6-1/2"	20,975	21,940	17,860	10	50
	3112048	3/4" x 12"	7/8"	6-1/2"	20,975	21,940	17,860	10	20
	**	7/8"	1"	7-1/2"	25,300	31,156	21,670	-	-
	**	1"	1-1/8"	8-1/2"	26,425	31,454	26,730	-	-

*Load values based on A-193, B7 Rods ** Special, Made to Order

INSTALLATION

- 1 Drill hole to correct size and depth using rotary-hammer.
- 2 Remove dust and rubble from the hole with compressed air, brush and water. Excess water must be removed although hole may be damp. Hold each end of the pouch and pull firmly to remove dividers. Mix thoroughly in pouch until color is uniform. Do not use excessive pressure or puncture pouch while mixing.
- 3 Cut corner and fill hole 2/3 full.
- 4 Insert stud turning slowly by hand.
- 5 Leave it undisturbed through prescribed curing time consistent with the on-site temperature.



ADHESIVE VOLUME ESTIMATING GUIDE

Type Package	Liquid Roc 200 Single Tube	Liquid Roc 200 Twin Tube	Liquid Roc 300 Pouch	Liquid Roc 300 Twin Tube	Liquid Roc 500+ Single Tube	Liquid Roc 500+ Twin Tube	VME Twin Tube	VMZ Internal Thread Injection System	Liquid Roc 700+ Single Tube	Liquid Roc 700+ Twin Tube
Net Contents	10 fl. oz.	28 fl. oz.	5.5 fl. oz.	28 fl. oz.	8.5 fl. oz.	22 fl. oz.	13oz.	20 oz.	10 fl. oz.	28 fl. oz.
Useable Vol.	15 cu. in.	45 cu. in.	10 cu. in.	45 cu. in.	13 cu. in.	34 cu. in.	20 cu. in.	31 u. in.	15 cu. in.	45 cu. in.
Rod Diameter	Linear inches of embedment into solid base material									
3/8"	63	133	105	312	91	237	140	215	63	133
1/2"	45	95	75	225	65	169	100	153	45	95
5/8"	35	73	38	172	50	130	76	118	35	73
3/4"	28	58	30	137	40	104	61	94	28	58
7/8"	23	49	25	115	33	87	51	79	23	49
1"	19	40	21	92	27	71	42	64	19	40
1-1/4"	14	30	16	71	20	54	32	49	14	30
Rod Diameter	Linear inches of embedment using screens into hollow base material									
3/8"	-	-	-	296	-	-	-	-	-	-
1/2"	-	-	-	172	-	-	-	-	-	-
5/8"	-	-	-	112	-	-	-	-	-	-
3/4"	-	-	-	62	-	-	-	-	-	-

ENGINEERING DATA

HOW TO SPECIFY

- 1 Select anchor diameter based on loading requirements.
- 2 Determine thickness of material to be anchored (if grout or shimming is to be used between material and concrete surface, add thickness of grout/shims to thickness of material to obtain total thickness of material to be anchored.)
- 3 Select anchor length that will satisfy total thickness of material, head clearance and embedment of anchor diameter selected.

SPECIFICATIONS, LIQUID ROC 200, 300, 500+, 700+

B Nominal Diameter (in.)						
Bolt Size (in.)	Capsule or Pouch	Single or Twin Tube	E - Min Embedment (in.)	S - Anchor Spacing (in.)	M - Edge Distance (in.)	T - Maximum Tightening Torque (ft. lbs.)
3/8"	7/16"	1/2"	3-1/2"	3-1/2"	3-1/2"	13
1/2"	9/16"	5/8"	4-1/2"	4-1/2"	4-1/2"	22
5/8"	11/16"	3/4"	5-1/2"	5-1/2"	5-1/2"	55
3/4"	7/8"	7/8"	6-1/2"	6-1/2"	6-1/2"	106
7/8"	1"	1"	8"	8"	8"	135
1"	1-1/8"	1-1/8"	9"	9"	9"	184

REDUCTION FACTORS

Tension		Shear		
Spacing (S) and Edge Dist. (M)	Factor (F)	Spacing (S) and Edge Dist. (M)	Direction of load	Factor (F)
S min. = 0.50S	0.7	S min. = 0.50S	toward edge not toward edge	0.6 1.0
M min. = 0.50M	0.7	M min. = 0.50M	toward edge not toward edge	0.4 0.5

GENERAL SPECIFICATIONS

Adhesive resin anchor shall be (polyester) (epoxy) (acrylic) as manufactured by MKT Fastening, LLC, #1 Gunnebo Dr., Lonoke, AR 72086

INSTALLATION

Adhesive resin anchors shall be installed in holes drilled with carbide tipped bits conforming to ANSI specification B212.15-94. Minimum installation depth and hole preparation shall be as recommended by manufacturer.

LIQUID ROC 300 CAPSULE ANCHORS

Anchor Diameter	Hole Diameter	Embedment Depth	Capsules Required
3/8"	7/16"	3-1/2"	(1) 3/8"
3/8"	7/16"	5-1/4"	(2) 3/8"
3/8"	7/16"	7"	(2) 3/8"
1/2"	9/16"	4-1/2"	(1) 1/2"
1/2"	9/16"	6-3/4"	(1) 3/8" & (1) 1/2"
1/2"	9/16"	9"	(2) 1/2"
5/8"	11/16"	5"	(1) 5/8"
5/8"	11/16"	7-1/2"	(1) 1/2" & (1) 5/8"
5/8"	11/16"	10"	(2) 5/8"
3/4"	7/8"	6-1/2"	(1) 3/4"
3/4"	7/8"	9-3/4"	(1) 5/8" & (1) 3/4"
3/4"	7/8"	13"	(2) 3/4"
7/8"	1"	7-1/2"	(1) 7/8"
7/8"	1"	11-1/4"	(2) 3/4"
7/8"	1"	15"	(2) 7/8"
1"	1-1/8"	8-1/2"	(1) 1"
1"	1-1/8"	12-3/4"	(1) 3/4" & (1) 1"
1"	1-1/8"	17"	(2) 1"
1-1/4"	1-3/8"	7-1/4"	(2) 3/4"
1-1/4"	1-3/8"	11"	(1) 3/4" & (1) 1"

FOR REDUCED SPACING AND EDGE DISTANCES

- 1 Linear interpolation is allowed for edge distances falling between 0.50M and 1.00M, and anchor spacing falling between 0.50S and 1.00S.
- 2 Load reduction factors should be combined where applicable. Where three or more anchors are used, spacing reduction factors must be multiplied together. Where two or more edge distances affect performance, edge reduction factors must be multiplied together. When a group of anchors is affected by both reduced spacing and reduced edge distances, the edge and spacing reduction factors must be multiplied together.

