LIQUID ROC® 500+ TWIN TUBE

AVAILABLE MATERIALS
- Amine base epoxy
- 1 to 1 ratio
- Square cut rods – A307 steel, zinc plated. Other sizes, materials and finishes available upon request

FEATURES/ADVANTAGES
- Mixes through motionless mixer nozzle
- Pre-measured adhesive
- Cartridge can be partially used and saved for future use
- Excellent chemical resistance when cured
- Non-shrink epoxy

CONCERNS
- Must be dispensed at 1 to 1 ratio
- Must be dispensed through static mixing nozzle
- Do not use below 40°F
- Do not overpump and create epoxy blowback
- 24 month shelf life
- This product is suitable for long term loading at room temperature or below. It is not intended for use overhead or in applications where elevated temperatures occur

APPROVALS/LISTINGS
- Contact customer service for approvals/listings for state D.O.T.'s
- ASTM C881, Type I and IV, Grade 3, Class B and C.

ORDER DETAIL

LR 500+ Order Code	Square Cut Rod Order Code	Rod Box Quantity	Rod Master Quantity
	3106032	10	50
	3106048	10	20
	3108032	10	50
	3108048	10	20
7800003 22 fl. oz. 10/Box	3110032	10	50
	3110048	10	20
	3112032	10	50
	3112048	10	20
	**	-	-
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*Load values based on A-193, B7 Rods **Special Made to Order

7521055
Pneumatic Gun for 22 oz.

7521081
Manual Gun for 22 oz.

ACCESSORIES

Order Code	Description
7521027	18 Element Mixer (Coarse THD)
7521032	1/2" - 18 Element Mixer

CURE TIME

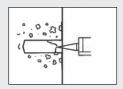| Concrete Temperature	Time
Over 80°F.	6 hrs
60° to 80°F.	12 hrs
40° to 60°F.	24 hrs

INSTALLATION

1 Drill to recommended diameter and depth using rotary-hammer.

2 Remove dust and rubble from the hole with compressed air, a brush and water. Excess water must be removed although hole may be damp.

3 Cut static mixer tip to second notch making sure the opening is obstruction free. Twist off cap on cartridge. Remove divider plugs.

4 Screw on static mixing nozzle. Load into dispensing tool. Dispense and discard a bead of material to display proper mix (indicated by uniform color change) before use.

5 Dispense adhesive into hole, filling from the bottom up.

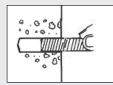6 Insert anchor rod into hole with a slight twisting motion.

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.	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.	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	63	133
1/2"	45	95	75	225	65	169	100	153	45	45	95
5/8"	35	73	38	172	50	130	76	118	35	35	73
3/4"	28	58	30	137	40	104	61	94	28	28	58
7/8"	23	49	25	115	33	87	51	79	23	23	49
1"	19	40	21	92	27	71	42	64	19	19	40
1-1/4"	14	30	16	71	20	54	32	49	14	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+

Bolt Size (in.)	B Nominal Diameter (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

LIQUID ROC 300 CAPSULE ANCHORS

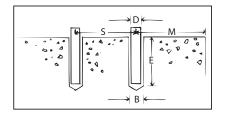| Anchor Diameter	Hole Diameter	Embedment Depth	Capsules Required
3/8"	7/16"	3-1/2"	(1) 3/8"
3/8"	7/16"	5-1/4"	(2) 3/8"
3/8"	7/16"	7"	(2) 3/8"
1/2"	9/16"	4-1/2"	(1) 1/2"
1/2"	9/16"	6-3/4"	(1) 3/8" & (1) 1/2"
1/2"	9/16"	9"	(2) 1/2"
5/8"	11/16"	5"	(1) 5/8"
5/8"	11/16"	7-1/2"	(1) 1/2" & (1) 5/8"
5/8"	11/16"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

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.

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.