

LIQUID ROC® 200

AVAILABLE MATERIALS

- Twin/Single Tube-hybrid urethane resin base, benzoyl peroxide hardener
- Square cut rods-A307 steel, zinc plated. Other sizes, materials and finishes available

FEATURES/ADVANTAGES

- Multi temperature formulation is suitable for use down to 23°F (-5°C)
- Fast cure time even at the coldest temperatures
- Styrene free formula is low odor and VOC free
- Ideal for bonding a wide variety of material to concrete
- In service temperatures of up to 320°F (160°C).
- Extremely high chemical resistance.
- Certified for drinking water applications to NSF Standard 61.
- Nozzle provided for dispensing

CONCERNS

- 18 month shelf life

ICC REPORT ESR-4252

CURE TIME

Concrete Temperature	Gel Time	Cure Time
23° F	50 minutes	5 hours
32° F	25 minutes	3-1/2 hours
50° F	10 minutes	1 hour
86° F	3 minutes	30 minutes



10 Oz. Single Tube



28 Oz. Twin Tube

ORDER DETAIL

Order Number	Description	Size	Quantity
7900010	Single Tube	10 oz.	12
7900028	Twin Tube	28 oz.	8

LOAD AND PERFORMANCE DATA

Anchor Size	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"							
Effective emb.	2 3/8"	7 1/2"	2 3/4"	10"	3 1/8"	12 1/2"	3 1/2"	15"	3 1/2"	17 1/2"	4"	20"	5"	25"
Characteristic Tension - Cracked														
2500 psi	2,022 lbs	6,968 lbs	2,520 lbs	11,946 lbs	3,052 lbs	19,479 lbs	3,618 lbs	31,313 lbs	3,618 lbs	40,447 lbs	4,420 lbs	49,417 lbs	6,177 lbs	69,063 lbs
4000 psi	2,313 lbs	7,266 lbs	3,187 lbs	12,521 lbs	3,861 lbs	20,416 lbs	4,576 lbs	31,313 lbs	4,576 lbs	43,313 lbs	5,591 lbs	56,813 lbs	7,814 lbs	84,241 lbs
6500 psi	2,428 lbs	7,266 lbs	3,615 lbs	13,144 lbs	4,921 lbs	21,188 lbs	5,833 lbs	31,313 lbs	5,833 lbs	43,313 lbs	7,127 lbs	56,813 lbs	9,960 lbs	88,432 lbs
Characteristic Tension - Uncracked														
2500 psi	2,855 lbs	7,266 lbs	3,557 lbs	13,303 lbs	4,309 lbs	21,188 lbs	5,107 lbs	31,313 lbs	5,107 lbs	43,313 lbs	6,240 lbs	56,813 lbs	8,721 lbs	90,844 lbs
4000 psi	3,611 lbs	7,266 lbs	4,499 lbs	13,303 lbs	5,450 lbs	21,188 lbs	6,460 lbs	31,313 lbs	6,460 lbs	43,313 lbs	7,893 lbs	56,813 lbs	11,031 lbs	90,844 lbs
6500 psi	4,603 lbs	7,266 lbs	5,736 lbs	13,303 lbs	6,948 lbs	21,188 lbs	8,235 lbs	31,313 lbs	8,235 lbs	43,313 lbs	10,062 lbs	56,813 lbs	14,062 lbs	90,844 lbs
Characteristic Shear														
Effective emb.	3 1/2"	4 1/2"	5"	6 1/2"	8"	10"	11"							
2500 psi	3,149 lbs	6,916 lbs	9,208 lbs	14,233 lbs	19,900 lbs	28,400 lbs	32,791 lbs							
4000 psi	3,149 lbs	6,916 lbs	11,018 lbs	16,305 lbs	22,506 lbs	29,526 lbs	41,478 lbs							

The above loads are based on a temperature range of max short term 176°F & max long term 122°F, hammer drilled holes into normal weight concrete that are dry, supplemental reinforcement present and for a single anchor design. No reductions have been taken for edge distance or anchor spacing. Verify that strength of the steel used is capable of supporting the desired load for each application.

INSTALLATION

- 1 Drill hole to recommended diameter and depth.
- 2 Clean dust from hole using a round wire brush. Use pressurized air to blow dust out of hole.
- 3 Open cartridge by removing the twist-off cap.
- 4 Place static mixing nozzle over cartridge opening and tighten. Load assembly into dispensing tool.
- 5 Dispense adhesive filling from bottom of hole to avoid air pockets
NOTE: Dispense and discard a bead of material to achieve proper mix, indicated by uniform color before starting.
- 6 Insert anchor rod into hole with a slight twisting motion.

ACCESSORIES



7500100
Caulking Gun for 10 oz. Single Tube



7521096
Pneumatic Dispensing Tool for 28 oz. Twin Tube



7521020
Replacement Nozzle



7521095
Manual Dispensing Tool for 28 oz. Twin Tube



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.

