LIQUID ROC® 700+

AVAILABLE MATERIALS
- Twin/Single Tube–acrylic 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 14°F (-10°C)
- Fast cure time even at the coldest temperatures
- Styrene free formula is low odor and VOC free
- Nozzle provided for dispensing

APPROVALS/LISTINGS
- ACI 318 Category 1 for cracked concrete
- ICC ESR - 4004
- Contact customer service for approvals / listings for state DOT's

CONSIDERATIONS
- 18 month shelf life

10 Oz. Single Tube

28 Oz. Twin Tube

ICC ES
ESR-4004

CURE TIME

Concrete Temperature	Gel Time	Cure Time
14° F (-10° C)	60 minutes	15 Hours
41° F (5° C)	20 minutes	2 Hours
59° F (15° C)	7 minutes	1 Hour
86° F (30° C)	2 minutes	20 Minutes

ORDER DETAIL

Order Number	Description	Size	Quantity
7620010	Single Tube	10 oz.	12
7620028	Twin Tube	28 oz.	4

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"	4 1/2"	2 3/4"	6"	3 1/8"	7 1/2"	3 1/2"	9"	3 1/2"	10 1/2"	4"	12"	5"	15"
Characteristic Tension - Cracked														
2500 psi	na	na	1,834 lbs	4,002 lbs	2,713 lbs	6,511 lbs	3,618 lbs	9,376 lbs	3,618 lbs	12,762 lbs	4,420 lbs	16,871 lbs	6,177lbs	26,361 lbs
4000 psi	na	na	1,950 lbs	4,254 lbs	2,884 lbs	6,922 lbs	3,876 lbs	9,967 lbs	4,522 lbs	13,566 lbs	5,591 lbs	17,934 lbs	7,814 lbs	28,022 lbs
Characteristic Tension - Uncracked														
2500 psi	1,978 lbs	3,747 lbs	3,053 lbs	6,662 lbs	4,309 lbs	10,410 lbs	5,107 lbs	14,990 lbs	5,107 lbs	20,403 lbs	6,240 lbs	23,984 lbs	8,721 lbs	29,578 lbs
4000 psi	2,102 lbs	3,984 lbs	3,246 lbs	7,082 lbs	4,611 lbs	11,065 lbs	6,197 lbs	15,934 lbs	6,460 lbs	21,688 lbs	7,893 lbs	25,495 lbs	10,480 lbs	31,441 lbs
Characteristic Shear														
Effective emb.	3 1/2"		4 1/2"		5"		6 1/2"		8"		10"		11"	
2500 psi	3,778 lbs		6,918 lbs		9,284 lbs		14,765 lbs		20,160 lbs		28,174 lbs		32,505 lbs	
4000 psi	3,778 lbs		6,918 lbs		11,018 lbs		16,282 lbs		22,522 lbs		29,542 lbs		41,115 lbs	

The above loads are based on a temperature range of max short term 104°F & max long term 75°F, hammer drilled holes 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.

ACCESSORIES

7500100
Caulking Gun for 10 oz. Single Tube

7521020
Replacement Nozzle for 10 oz.Single Tube

7521035
Replacement Nozzle for 28 oz.Twin Tube

7521096
Pneumatic Dispensing Tool for 28 oz. Twin Tube

7521095
Manual Dispensing Tool for 28 oz. Twin Tube

LIQUID ROC® 700+ CONTINUED

USAGE INSTRUCTIONS - CONCRETE

MAC: Cleaning for hole diameter d0 3/4“ and hole depth h0 10dS (uncracked concrete only!)

1. Hammer drill a hole into the base material to the diameter and embedment depth required by the selected anchor.

2a. Starting from the bottom or the back of the drilled hole, blow the hole clean by a hand pump a minimum of four times

2b. Check the brush diameter. Brush the hole with an appropriate sized wire brush > db, min a minimum of four times in a twisting motion. If the bottom of the drilled hole is not reached with the brush, a brush extension must be used.

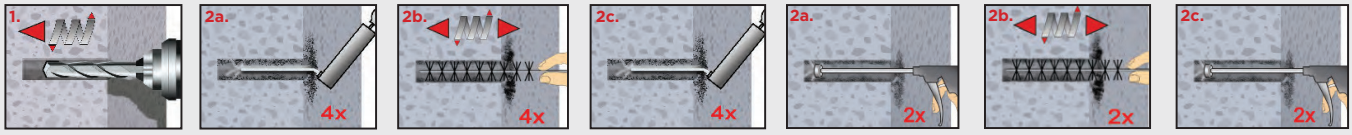
2c. Finally blow the hole clean again with a hand pump a minimum of four times.

CAC: Cleaning for all hole diameter in uncracked and cracked concrete

2a. Starting from the bottom or back of the hole, blow the hole clean with compressed air (min. 90 psi) a minimum of two times until return air stream is free of noticable dust. If the bottom of the drilled hole is not reached an extension must be used.

2b. Check the brush diameter. Brush the hole with an appropriate sized wire brush > db,min a minimum of two times in a twisting motion. If the bottom of the drilled hole is not reached with the brush, a brush extension must be used.

2c. Finally blow the hole clean again with compressed air (min. 90 psi) a minimum of two times until return air stream is free of noticable dust. If the bottom of the drilled hole is not reached an extension must be used.



After cleaning, the hole has to be protected against re-contamination in an appropriate way, until dispensing the adhesive in the hole. If necessary, the cleaning has to be repeated directly before dispensing the adhesive. In water-filled hole applications, the water must not be allowed to re-enter the hole.

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	VMZ Internal Thread Injection System	Liquid Roc 700+ Single Tube	Liquid Roc 700+ Twin Tube	EP800	
Net Contents	10 fl. oz.	28 fl. oz.	5.5 fl. oz.	28 fl. oz.	10 fl. oz.	10 fl. oz.	28 fl. oz.	9.5 fl. oz.	20.9 fl. oz.
Useable Vol.	15 cu. in.	45 cu. in.	10 cu. in.	45 cu. in.	15 cu. in.	15 cu. in.	45 cu. in.	13 cu. in.	34 cu. in.
Rod Diameter	Linear inches of embedment into solid base material								
3/8”	63	133	105	312	63	63	133	91	237
1/2	45	95	75	225	45	45	95	65	169
5/8”	35	73	38	172	35	35	73	50	130
3/4”	28	58	30	137	28	28	58	40	104
7/8”	23	49	25	115	23	23	49	33	87
1”	19	40	21	92	19	19	40	27	71
1-1/4”	14	30	16	71	14	14	30	20	54
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

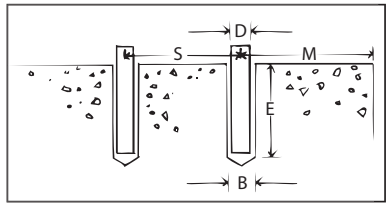
HOW TO SPECIFY

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.

REDUCTION FACTORS

Tension		Shear		
Spacing (S) and Edge Dist. (M)	Factor (F)	Spacing (S) and Edge Dist. (M)	Direction ofload	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

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.

GENERAL SPECIFICATIONS

Adhesive resin anchor shall be polyester, epoxy, acrylic, hybrid-ureathane 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.