

ROCKWELL LIME COMPANY

Mason's Hydrated Lime



CORSON'S MIRACLE LIME

Preferred By Professionals

- CORSON'S MIRACLE LIME is a Type "S" hydrated mason's lime
- Outstanding workability saves time and money
- Offers a unique combination of strength and elasticity
- Meets all national specifications, ie. (ASTM, UBC, BOCA, SBCC)

Contractors and Architects

Rely on **CORSON'S MIRACLE LIME**

CORSON'S MIRACLE LIME is the clear choice of professional contractors and architects alike. Contractors can lay a course easily and quickly with the high sandcarrying mortar. Architects

specify **CORSON'S MIRACLE LIME** because they can count on its strength, bond and durability. All are provided with a cost savings over ordinary masonry cement.

Features

BOND STRENGTH...In masonry construction the bond actually has two parts...flexural bond strength and extent of bond. Mortars should have sufficient strength to carry the loads imposed with regard to both tensile strength and compressive strength. There is considerable support to the theory that mortars should never be stronger than the masonry unit. With higher strength mortars, under certain conditions, the unit, rather than the mortar, is more likely to crack. Mortar was originally conceived as a means of bedding masonry units and bonding them together. Mortar serves masonry in the comparison capacity of a gasket or washer so that ideally some resilience is necessary to "cushion" deflection. Rigidity in mortar is incompatible with this concept.

High lime mortar, because of the degree of workability and high water retention, promotes excellent adhesion and extent of bond which produce watertight walls.

Considerable research has been completed on bond strengths. It has proven that PCL mortars have greater bond than other equivalent mortars.

ELASTICITY...A high lime content **CORSON'S MIRACLE LIME** mortar will adjust itself under structure stress and return to normal condition without injuring the bond. High cement mortars, on the other hand, tend to crack under stress because they are too brittle.

DURABILITY...**CORSON'S MIRACLE LIME** contains a self-healing element which can react to form an actual lime deposit, thus filling any mortar cracks which may appear. This auto-genous healing occurs in mortars that contain Type "S" lime.

WATERPROOF...In masonry cement both waterproofing and plasticity agents are added. With high lime mortars these characteristics are naturally present.

GREATER EFFLORESCENCE CONTROL... Recent tests indicate the higher the proportion of lime in mortar, the lower the tendency toward efflorescence.

WORKABILITY...High lime content **CORSON'S MIRACLE LIME** mortars are easy to spread and provide well-filled joints. More bricks can be layed before tooling and the need for retempering is practically eliminated.

GREATER ECONOMY...Contractors state that when using mortar made with **CORSON'S MIRACLE LIME** Type "S" they improve their yield, efficiency and profitability.



TABLE C-270 CORSON'S MIRACLE LIME SPECIFICATIONS

Mortar Type	Water Retention ASTM	Min. Comp. Strength ASTM	PROPORTIONS BY VOLUME		
			Portland	Lime	Sand
M	75	2500	1	1/4	Not more than 3 times the sum volume of the cement and lime used.
S	75	1800	1	1/4 to 1/2	
N	75	750	1	1/2 to 1-1/4	
O	75	350	1	1-1/4 to 2-1/2	

Note: Corson's Miracle Lime far exceeds ASTM specifications. It complies with ASTM C-207-92. Type S hydrated lime for masonry purposes.

Independent Laboratory Tests Support the Use of **CORSON'S MIRACLE LIME**

Materials Used

1. **CORSON'S MIRACLE LIME**, Type "S",
(ASTM Specification C-207-92) produced by Rockwell Lime Company.
2. Regular Type 1 Portland cement (ASTM Specification C-150-92).
3. Masonry Sand
(ASTM Specification C-144-91) purchased locally.

Suggested Mixing Instructions

1. Charge mixer with 5-6 gallons potable water.
2. Add one-third required amount of sand mix.
3. Add **CORSON'S MIRACLE LIME** and Portland cement.
4. Add remainder of sand.
5. Add potable water and mix until consistency is obtained.



Mix Preparations (By Actual Volume)

Mortar Type			
O 1:2:9	N 1:1:6	S 1:1/2:4-1/2	M 1:1/4:3-3/4
1 part Portland cement Type 1	1 part Portland cement Type 1	1 part Portland cement Type 1	1 part Portland cement Type 1
2 parts Corson's Miracle Lime	1 part Corson's Miracle Lime	1/2 part Corson's Miracle Lime	1/4 part Corson's Miracle Lime
9 parts masonry sand	6 parts masonry sand	4-1/2 parts masonry sand	3-3/4 parts masonry sand

Properties of Mix

	Mortar Type			
	O	N	S	M
Water Retention-ASTM C-91 Initial Flow	108	114	110	111
Flow After Suction	96	94	109	89
Water Retention %	88.9	82.5	81.8	80.2
Compressive Strength ASTM C-270 7- Day Strength (psi)	722	1907	2698	3894
28- Day Strength (psi)	985	2289	3548	5184

1. Lime-cement mortars can be formulated to be compatible with brick and block being used.

Mix Proportions By Volume

There is a great deal of flexibility in specifying mixtures of **CORSON'S MIRACLE LIME** Type "S" hydrated lime and standard Portland cement for mortar. This flexibility permits both the architect and the contractor to use the proper formulation for specific

masonry units under varying job conditions. They can also be assured of a mortar possessing strength and durability including an ample safety factor well in excess of standard design limits.

Recommended Mixes

TABLE X1.1 Guide for the Selection of Masonry Mortars ^A			
Location	Building Segment	Mortar Type	
		Recommended	Alternative
Exterior, above grade	Load-bearing wall	N	S or M
	Non-load bearing wall	O ^B	N or S
	Parapet wall	N	S
Exterior, at or below grade	Foundation wall, retaining wall, manholes, sewers, pavements, walks and patios	S ^C	M or N ^C
Interior	Load-bearing wall	N	S or M
	Non-bearing partitions	O	N
Interior or Exterior	Tuck pointing	see X3	see X3

^A This table does not provide for many specialized mortar uses, such as chimney, reinforced masonry and acid-resistant mortars.

^B Type O mortar is recommended for use where the masonry is unlikely to be frozen when saturated, or unlikely to be subjected to high winds or other significant lateral loads. Type N or S mortar should be used in other cases.

^C Masonry exposed to weather in a nominally horizontal surface is extremely vulnerable to weathering. Mortar for such masonry should be selected with due caution.

TABLE X3.1 Guide for the Selection of Tuck Pointing Mortar ^A		
Location or Service	Mortar Type	
	Recommended	Alternative
Interior	O	K, N
Exterior, above grade exposed on one side, unlikely to be frozen when saturated, not subject to high wind or other significant lateral load.	O	N, K
Exterior, other than above	N	O

^A In some applications structural concerns may dictate the use of mortars other than those recommended.

This table is not applicable to pavement applications.

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