



# EUCO WINTER ADMIXTURE

## LIQUID MASONRY MORTAR ACCELERATOR

### DESCRIPTION

**EUCO WINTER ADMIXTURE (EWA)** is a multi-purpose liquid calcium chloride admixture designed to accelerate the normal setting rate of mortar, increase strength development at all ages, and to improve workability. It can be used safely with gray or white portland cement or colored masonry cements without causing discoloration.

### PRIMARY APPLICATIONS

EUCO WINTER ADMIXTURE is used in mortar to lay brick, block, structural clay tile and glass block to eliminate the dangers connected with freezing mortar joints.

### FEATURES/BENEFITS

- Accelerates set times of mortar
- Aids in protecting mortar in cold weather
- Cuts construction cost - no cold weather job delay
- Increases strengths at all ages
- Improves workability

### TECHNICAL INFORMATION

#### Typical Engineering Data

The following results were developed under laboratory conditions.

#### Test Results- Prepared Mortars

##### Brickset Mortar

Setting Rate @70°F (21°C)	Plain	with EWA
Initial Set	3 hrs 15 min	2 hrs 15 min
Final Set	5 hrs 0 min	4 hrs 45 min

	Compressive Strength ASTM C109, 2" (50 mm) cubes	
	Plain	with EWA
24 hours	4.3 psi (.03 MPa)	64 psi (0.4 MPa)
3 days	495 psi (3.4 MPa)	606 psi (4 MPa)
7 days	787 psi (5.4 MPa)	1015 psi (7 MPa)
28 days	857 psi (6 MPa)	1191 psi (8 MPa)

**Water Retention** ASTM C91, 76.1% 82.3%

**Absorption** ASTM C642 7.0% 5.6%

##### Stoneset Mortar

Setting Rate @70°F (21°C)	Plain	with EWA
Initial Set	3 hrs 0 min	2 hrs 10 min
Final Set	5 hrs 0 min	4 hrs 30 min

	Compressive Strength ASTM C109, 2" (50 mm) cubes	
	Plain	with EWA
24 hours	8.5 psi (0.6 MPa)	44 psi (0.3 MPa)
3 days	317 psi (2.2 MPa)	329 psi (2.3 MPa)
7 days	630 psi (4.3 MPa)	643 psi (4.4 MPa)
28 days	773 psi (5.3 MPa)	800 psi (5.5 MPa)

**Water Retention** ASTM C91 74.0% 80.1%

**Absorption** ASTM C642 8.3% 7.5%

**Appearance:** EUCO WINTER ADMIXTURE is a clear liquid with a deep blue color.

### PACKAGING

EUCO WINTER ADMIXTURE is packaged in 55 gal (208 L) drums, 5 gal (18.9 L) pails, and in cases of 1 gal (3.8 L) jugs (6 jugs per case).

## SHELF LIFE

2 years in original, unopened container

## SPECIFICATIONS/COMPLIANCES

- When tested according to ASTM C494, Type C, EUCO WINTER ADMIXTURE complies and gives a freeze-thaw relative durability factor of 102%.
- In compliance with ASTM C494, Type C requirements, this product will increase one day strength a minimum of 125% over plain and will quicken the setting time a minimum of 1 hour but no more than 3 hours and 30 minutes.

**NOTE:** This product does not protect plastic mortar from freezing. This product will allow the mortar to gain strength at a faster rate in cold weather. The mortar should achieve a minimum strength of 500 psi (3.4 MPa) before exposure to freezing temperatures.

## DOSAGE RATES

EUCO WINTER ADMIXTURE may be added directly to the gauging water [85 to 100°F (29 to 38°C) if possible] in the following proportions based on the temperatures expected during the 24 hours following the work:

<u>Temperature</u>	<u>EWA</u>	<u>Water</u>
25°F (-4°C)	1 gal (3.8 L)	15 gal (57 L)
20°F (-7°C)	1 gal (3.8 L)	10 gal (38 L)
15°F (-9°C)	1 gal (3.8 L)	7 gal (27 L)

Add an additional quart of EUCO WINTER ADMIXTURE for each bag of lime in the mix.

**OR**

EUCO WINTER ADMIXTURE may be added directly to each mortar batch. Add the quantity indicated per bag of cement and/or lime.

	<b>Daily Working Temperature*</b>		
	<b>32° (0°C)</b>	<b>25° (-4°C)</b>	<b>20° (-7°C)</b>
<b>Portland Cement Mortars</b>	1 quart (0.9 L)	1 1/2 quart (1.4 L)	2 quart (1.9 L)
<b>Masonry Cement</b>	1 pint (0.5 L)	1 1/2 pint (0.7 L)	1 quart (0.9 L)
<b>Colored Mortar</b>	1 pint (0.5 L)	1 1/2 pint (0.7 L)	1 quart (0.9 L)

\*The given temperatures are an assumed minimum with warming conditions.

## DIRECTIONS FOR USE

At the recommended dosage rate, EUCO WINTER ADMIXTURE is added directly to the gauging water.

The Euclid Chemical Company recommends the contractor follow typical cold weather concreting practices such as the guidelines in ACI 306, Standard Specification for Cold Weather Concreting.

## CLEAN-UP

Clean tools and equipment with water before mortar hardens.

## PRECAUTIONS/LIMITATIONS

- Use no more than the prescribed amount of EUCO WINTER ADMIXTURE.
- Test batches/mix design/sample slabs may be required due to variations in local cement and aggregate.
- Keep mortar from freezing until a minimum strength of 500 psi (3.4 MPa) is reached.
- Do not add EUCO WINTER ADMIXTURE directly to dry cement.
- In all cases, consult the Safety Data Sheet before use.

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