

# FREEZBAN

LIQUID AND BEAD FORMULATIONS OF CALCIUM CHLORIDE

### SPECIALTY **CONSTRUCTION PRODUCTS**

# DESCRIPTION

FreezBan™ liquid and FreezBan Beads are multipurpose admixtures for use with portland cement/ lime mortar and prepared masonry mortars and non-reinforced concrete. This exclusive rust retarding formulation combines an effective and time proven chemical accelerator, calcium chloride, with a powerful wetting agent.

- Plain concrete and mortar placements down to 15°F/-9°C
- Setting brick, concrete block, stone, glass block and structural clay tile
- Driveways, sidewalks, patios, slabs on grade and footers not containing reinforcing steel

## **ADVANTAGES**

- FreezBan Beads dissolve faster and more completely than competitive powders
- Permits masonry to bear loads sooner
- Improves adhesion, mortar density and workabil-
- Increases early and ultimate strengths, tensile and compressive strengths
- Minimizes shrinkage
- · Significantly reduces efflorescence

# TECHNICAL DATA

FreezBan and FreezBan Beads fully comply with the requirements of the following specifications for accelerating admixtures in concrete and masonry mortar:

- ASTM C-494, Type C
- AASHTO M-194, Type C
- U.S. Army Corps of Engineers CRD-C-87, Type C

# **ESTIMATING GUIDE** Lowest Expected

Lowest Expected		
Temperature	per bag of masonry mortar	
	Liquid	Beads
Above 32°F/0°C	1pt./0.5L	1/2 bag
Above 25°F/-4°C	1.5 pt./0.7L	1 bag
Above 20°F/-6°C	1 qt./0.9L	1 bag
Above 15°F/-9°C	1.5 qt./1.4L	1 bag
	per sack of portland cement	
Above 32°F/0°C	1qt./0.9L	1 bag
Above 25°F/-4°C	1.5 qt./1.4L	1.5 bag
Above 20°F/-6°C	2 qt./1.9L	2 bag
Above 15°F/-9°C	3 qt./2.8L	2 bag

Limed Mortars: Use 1 quart/0.9 liter liquid FreezBan or 1 bag FreezBan Beads for each bag of lime added in addition to the portland cement requirements listed above.

At temperatures above 80°F/57°C. the amount of FreezBan may be reduced proportionately to prevent too rapid a set acceleration, but never use less than 0.5 pint/0.24 liter of FreezBan, or 1/8 bag of FreezBan Beads, per bag of masonry mortar or 1 pint/0.5 liter of FreezBan liquid, or 1/4 bag of FreezBan Beads, per sack of cement.

# **DIRECTIONS**

Add directly to the gauging water for each batch of mortar. Under no circumstances should FreezBan liquid or beads be added to the cement or mortar. To obtain maximum results:

- Keep masonry units dry
- Use a windbreak around mortar board and mixer to minimize the chill factor
- Keep sand and gauging water ice free
- Protect work from freezing for first 24 hours
- Keep walls dry next to metal door or window frames; frames may corrode due to moisture and air
- If frames are scratched or abraded, reapply a metal primer





### CLEANUP

Clean tools or containers that come in contact with FreezBan with water.

# **PACKAGING**

FreezBan is available in 55 U.S. gallon/208 Liter drums, 5 U.S. gallon/18.9 Liter pails, shipped 36 per pallet shrink wrapped and 1 U.S. Gallon/3.78 Liter jugs, packed 4 per case. FreezBan Beads are packaged in 1.5 pound/0.68 Kg bags, 20 per case.

# LIMITATIONS

- FreezBan liquid and FreezBan Beads change the finishing characteristics of mortar and should be used throughout a given surface. Stopping in the middle of a wall may create bands of joints with a noticeable difference in appearance.
- Note: Independent Laboratory Tests using ASTM procedures prove no discoloration or efflorescence is caused by using FreezBan formulations.
- FreezBan liquid and beads contain a rust retarder to slow oxidation. Where steel, iron or metal work, such as door or window frames and casings are not completely imbedded in the mortar, it is recommended that the surfaces coming into contact with the mortar be coated with a rust preventive material.
- The best prevention eliminates the two primary causes of oxidation, moisture and oxygen. Proper waterproofing of masonry construction is imperative to prevent the problems often mis-associated with the use of materials containing chloride ions. American Concrete Institute (ACI) publication 306, Cold Weather Concreting states, In general, corrosion of conventional reinforcement has not occurred frequently due to chloride but the real threat of an increased potential for corrosion exists where chlorides are used, particularly where there is cracking, wet and dry areas, shallow cover and permeable concrete.

### STORAGE

To prevent contamination by moisture and dirt, drums that have been opened should be tightly closed and stored in horizontal position to prevent moisture accumulation on drum heads. If crystals form when FreezBan NC is stored at extreme low temperatures, raise temperature to above 30°F/1°C and thoroughly agitate until in solution before use. Shelf life of properly stored material is one year from date of manufacture.

# **C**AUTION

Causes eye irritation on direct contact. Overexposure may cause skin and respiratory tract irritation. Do not take internally. Keep out of reach of children.

All label precautions and the MSDS must be read and understood before using this product.



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