



# BioMIC

## ANTIMICROBIAL CONCRETE ADMIXTURE

### DESCRIPTION

BioMIC is an antimicrobial admixture added to the concrete mix at the time of batching. It forms a molecular bond with the concrete, preventing microbial-induced corrosion (MIC) damage and inhibiting the growth of other product-damaging and odor-causing microorganisms, such as bacteria, algae and fungi.

BioMIC's technology is an EPA registered microbiostatic agent that ruptures microbe cell walls on contact. This complete electro-physical destruction of the microbes that come in contact with it does not deplete BioMIC, and, as it is also leach resistant, it will not migrate through the concrete, retaining its effectiveness indefinitely.

### APPLICATIONS

Wastewater and water treatment, sewer and drainage cast-in-place applications and other such applications.

Manholes, pipes, tanks and other such precast structures used in wastewater and water treatment, sewer and drainage applications.

Shotcrete related applications in wastewater and water treatment, sewer and drainage applications.

Concrete and mortar repairs where protection from microbial-induced-corrosion is required.

### ADVANTAGES

Protects concrete against bio-damage caused by hydrogen sulfide gas ( $H_2S$ ).

Electro-physical destruction mechanism destroys the bacteria cell walls. Repeated contact with bacteria will not lessen BioMIC's effectiveness.

Becomes an active and integral part of the entire concrete structure, so it remains effective even if the surface is abraded.

Contains no heavy metals or carcinogens.

Broad-spectrum protection, including gram positive and gram negative bacteria, fungi, mildew and algae.

Kills the entire family of Thiobacillus strain on contact for the service life of the concrete.

BioMIC is designed to be used alone or in combination with PENETRON ADMIX®.

### DIRECTIONS FOR USE

#### Dosage rate:

For prevention and protection against high levels of microbial-induced-corrosion, it is recommended that BioMIC be dosed at a rate of one gallon per cubic yard (1 gal/yd<sup>3</sup>, 5 L/m<sup>3</sup>) of concrete, replacing one gallon of mix water per cubic yard (1 gal/yd<sup>3</sup>, 5L/m<sup>3</sup>) of concrete.

#### Mixing:

Trial mixes should be carried out under project conditions to confirm individual plastic and hardened properties of the concrete. Concrete treated with BioMIC should be placed and finished in accordance with good concrete practices. ACI guidelines and recommendations should be observed.

### SPECIAL CONSIDERATIONS

When incorporating BioMIC, the temperature of the concrete mix should be above 40°F (4°C).

### PACKAGING

BioMIC is available in 55-gallon (208-l) drums and 275-gallon (1041-l) totes.

### STORAGE / SHELF LIFE

BioMIC should be protected from freezing. If product does freeze, it should be discarded. Shelf life is one year when stored in original unopened container at or below 77°F (25°C).

### SAFE HANDLING INFORMATION

BioMIC may cause moderate skin and eye irritation. Penetron International, Ltd. maintains comprehensive and up-to-date Safety Data Sheets on all its products. Each sheet contains health and safety information for the protection of your employees and customers. KEEP OUT OF REACH OF CHILDREN.

Contact Penetron International, Ltd. or your local Penetron representative to obtain copies of Safety Data Sheets prior to product storage or use.

**WARRANTY:** PENETRON INTERNATIONAL, LTD. warrants that the products manufactured by it shall be free from material defects and will conform to formulation standards and contain all components in their proper proportion. Should any of the products be proven defective, the liability to PENETRON INTERNATIONAL, LTD. shall be limited to replacement of the material proven to be defective, and PENETRON INTERNATIONAL, LTD shall in no case be liable otherwise or for incidental or consequential damages. **PENETRON INTERNATIONAL, LTD. MAKES NO WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED.** User shall determine the suitability of the product for its intended use and assume all risks and liability in connection therewith.

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