

### Product Description

Xypex Bio-San C500 is a uniquely designed admixture for integral, long-term protection of concrete in sewage conditions with levels of H<sub>2</sub>S that cause microbial induced corrosion. Bio-San C500 is formulated to improve the properties of concrete against microbial induced corrosion resulting from bio-film formations. The unique Xypex Crystalline Technology creates a permanent structure throughout the pores and capillary tracts providing waterproofing and enhanced chemical protection including acid and sulphate resistance. Bio-San C500 limits microbial induced corrosion, stops infiltration/exfiltration of water, and provides acid and sulphate resistance, significantly extending the service life of concrete sewage collection systems and waste water infrastructure.

### Recommended for:

- Manholes / sewer pipes
- Pump and lift stations
- Head works
- Septic tanks
- Digesters
- Clarifiers
- Industrial structures

### Advantages

- Protects against microbial induced corrosion
- Resists extreme hydrostatic pressure
- Resistant to aggressive chemicals (acids and sulphates)
- Becomes a permanent, integral part of the substrate and cannot be punctured, damaged or lose adhesion
- Less costly to apply than most other methods
- Added to the concrete at the time of batching and therefore not subject to weather and surface moisture constraints

### Product Characteristics

Appearance and Colour	red brown powder
Chloride Ion Content Powder	≤ 0,1% by mass
Alkali Content (Na <sub>2</sub> O equivalent) of Powder	≤ 8,5% by mass
Bulk Density of Powder	925 +/- 50 kg/m <sup>3</sup>
VOC of Powder	no VOC
Bleeding of Fresh Concrete	≤ 50% of control mix
MIC Resistance of Concrete (10 yr)	9x reduction in corrosion loss
Water Penetration Depth of Concrete	test mix < control mix
Compressive Strength of Concrete 28 d (MPa)	test mix ≥ control mix
Sulphate Resistance of Concrete (expansion)	test mix < control mix
Acid Resistance of Concrete (mass loss)	test mix < control mix
Chloride Diffusion of Concrete	test mix < control mix
Self-healing of Stable Cracks	≤ 0,5 mm

Note: Performance test results may differ based on statistical variability and site conditions.

### Dosage Rates

Xypex Bio-San C500: 1% by mass of cement.

### Compatibility

Xypex Bio-San C500 is compatible with all types of cements according to EN 197-1 and with standard types of admixtures according to EN 934-2+A1. Conduct trial batches as required by EN 206+A1 to assess mix design under project conditions.

## Directions for Use

Xypex Bio-San C500 is added to the concrete at the time of batching. It is important to obtain a homogeneous mixture of the Bio-San with the concrete. Do not add dry powder directly to wet mixed concrete as this could cause clumping and thorough dispersion may not occur. The sequence of procedures for addition will vary according to the type of batch plant operation and equipment. The Bio-San can be added to the coarse aggregate conveyor or the central mixer prior to batching using standard practices. Alternatively, the Bio-San powder can be added first to the drum of the ready-mix truck along with a small amount of water and then spinning the drum prior to adding the other ingredients. Avoid delays in adding the other components; mix at a high speed to ensure homogeneity.

Consult with a local Xypex Technical Services Representative for more detailed instruction on batching concrete containing the Xypex Bio-San C500.

## Curing

Follow specified project curing practices compliant with EN 206+A1, EN 13670 and local requirements.

## Packaging

Xypex Bio-San C-500 is available in 22,7 kg pails.

## Storage

Xypex products must be stored dry at a minimum temperature of 7°C. Shelf life is one year when stored under proper conditions.

## Health & Safety

The Xypex powder or mixture is highly alkaline. Xypex may cause significant skin irritation and serious eye damage. During handling the powder or mixture, take the following precautions: wear impervious clothing, goggles, gloves and boots. Avoid direct contact with the powder or mixture. If skin contact occurs, immediately wash affected area with clean water; if irritation persists, seek immediate medical attention. If eye contact occurs, immediately flush eyes with clean water and seek immediate medical attention. Can be toxic to aquatic life, with long lasting effects. The safety data sheets are readily available through your local Xypex dealer or representative.

Dispose of contents to hazardous waste collection point, in accordance with local or national regulations.

## Certification

Xypex Bio-San C500 is certified as a water retaining admixture according to EN 934-2+A1. The certification of the product, and regular audits of the FPC are carried out by Notified Body 1020 TZUS (060-051352).

## Warranty

The Manufacturer warrants that the products manufactured by it shall be free from material defects and will be consistent with its normal high quality. Should any of the products be proven defective, the liability to the Manufacturer shall be limited to replacement of the product ex factory. The Manufacturer 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. The user shall determine the suitability of the product for his intended use and assume all risks and liability in connection therewith.



**Manufacturer:** Xypex Chemical Corporation, 13731 Mayfield Place, Richmond, BC, Canada V6V 2G9  
**Distributor:**

XYPEX is a registered trademark of Xypex Chemical Corporation. Copyright © 2007-2021 Xypex Chemical Corporation.