

High performance mortar with superior biogenic corrosion resistance

Description

SewperCoat® Wet Spray is a mortar designed to provide exceptional resistance to the biogenic corrosion environment found in sanitary sewers. The unique biogenic corrosion resistance of SewperCoat® Wet Spray is due to its 100% calcium aluminate composition, i.e. the combination of calcium aluminate cement and calcium aluminate aggregates.

SewperCoat® Wet Spray can be utilized to rehabilitate sewer infrastructures that have been damaged over years by biogenic corrosion. SewperCoat® Wet Spray can also be utilized to provide a protection lining to new infrastructures that will be exposed to biogenic corrosion conditions. SewperCoat® Wet Spray is a cementitious mortar, fully compatible with the moist environment found in sewers.

Advantages

The unique properties of SewperCoat® Wet Spray result from the chemical and mineral phases formed during the hydration process. SewperCoat® is unique when compared to other materials such as ordinary portland cement (OPC) concrete, epoxies, poly-vinyl chloride (PVC) or polyethelene because of its ability to inhibit bacterial activity which drastically reduces the production of sulphuric acid. Key advantages of the SewperCoat® Wet Spray are as follows:

- Inhibits bacterial activity
- Neutralizes sulfuric acid
- Readily adheres to damp concrete
- Easy Monolithic installation
- Provides Long Term corrosion protection
- Contains no VOC's

Chemical composition of main constituents

Substances	Typical % by Weight
Al ₂ O ₃	39-44
CaO	35-40
SiO ₂	2-7
Fe ₂ O ₃	9-15

Properties

Compressive Strength (MPa) (AS 1478.2 - 2005)	
6 hours	>20MPa
24 hours	>40MPa
28 days	>70MPa
Modulus of Rupture (Flexural Strength) (MPa) (AS 1012.11 - 2000):	
24 hours	>4.5MPa
28 days	>8.5MPa
Indirect Tensile strength (AS 1012.10 - 2000):	
28 days	>3.5MPa
Dimensional Change (Drying shrinkage) (AS 1478.2 - 2005):	
56 days	<600 microstrains

Application Instructions

Preparation

Clean the surface and remove any dust, unsound or contaminated material, plaster, oil, paint, grease, corrosion deposits or algae. Where breaking out is not required, roughen the surface and remove any laitance by light scabbling or grit-blasting. The substrate should be thoroughly saturated with clean water prior to the spray application of the SewperCoat® Wet Spray. Under no circumstances shall the material be applied in an area where running water exists.

Application

In the wet spray process, the mortar is batched and mixed prior to being pumped along suitable hoses to the discharge nozzle. High velocity air is introduced at the nozzle to disperse the mortar and propel it into position. The impact of the mortar ensures excellent contact with the substrate and good compaction. As the material is batch mixed prior to pumping, the water content can be accurately controlled, ensuring a consistent product is applied to the substrate.

The spraying technique employed for each job will depend on the nature of the work and the materials used. Wherever possible, it is recommended that trials are performed with the material and equipment on elements which exhibit the same features as the job to ensure the spraying technique

SewperCoat® Wet Spray

employed is appropriate. If sagging occurs during application to vertical surfaces, the SewperCoat® Wet Spray should be completely removed and reapplied at a reduced thickness on to the substrate.

Note: minimum applied thickness of SewperCoat® Wet Spray is 25mm. Equipment used must be clean and free of portland cement build up to avoid accelerated set. Water addition to be between 2.7-3.00L per 20kg bag of SewperCoat® Wet Spray. Please refer to the SewperCoat® Wet Spray application guide for further information.

Application by hand trowel

The SewperCoat® Wet Spray can be also be applied by hand trowelling onto areas of concrete where the application by the spray method is either not suitable or practical. When applying the material by hand trowel it is important that the same preparation and curing procedures are followed as the spray applied process. The concrete requires a rough surface which is either obtained by high pressure water blasting or grit blasting. The surface also requires thorough pre-wetting to provide a saturated surface dry (SSD) surface.

SewperCoat® Wet Spray can then applied by hand trowel at a min thickness of 25mm. Care should be taken not to overwork material. The SewperCoat® Wet Spray should then be cured immediately after finishing using Concrete A99.

Finishing

SewperCoat® Wet Spray is finished by cutting to the required profile and closing with a steel trowel float. Wooden or plastic floats, or damp sponges can be used to achieve the desired texture. The complete surface should not be overworked. The surface will normally be finished immediately after spray application.

Maximum size of application

SewperCoat® Wet Spray applied by either the wet spray or hand applied technique should be applied up to natural expansion joints within the structure. Any expansion joints should be reflected through the SewperCoat® Wet Spray as well as any significant live cracks to ensure a defect free monolithic layer of material. The maximum area of application of the material is therefore determined by the number of joints within the concrete structure.

Important notice

A Safety Data Sheet (SDS) and Technical Data Sheet (TDS) are available from the Parchem website or upon request from the nearest Parchem sales office. Read the SDS and TDS carefully prior to use as application or performance data may change from time to time. In emergency, contact any Poisons Information Centre (phone 13 11 26 within Australia) or a doctor for advice.

Product disclaimer

This Technical Data Sheet (TDS) summarises our best knowledge of the product, including how to use and apply the product based on the information available at the time. You should read this TDS carefully and consider the information in the context of how the product will be used, including in conjunction with any other product and the type of surfaces to, and the manner in which, the product will be applied. Our responsibility for products sold is subject to our standard terms and conditions of sale. Parchem does not accept any liability either directly or indirectly for any losses suffered in connection with the use or application of the product whether or not in accordance with any advice, specification, recommendation or information given by it.

High temperature working

At ambient temperatures above 35°C, the material should either not be used or appropriate measures should be taken to control the environment such as using ice water to mix the material and having temporary shading of the area where the material is to be applied. Please contact Parchem for further information about applying the material in temperatures above 35°C.

Curing

SewperCoat® Wet Spray is a cement-based repair mortar. In common with all cementitious material it must be cured immediately after finishing in accordance with good concrete practice. The use of Concure A99, sprayed on to the surface of the finished SewperCoat® Wet Spray in a continuous film, is recommended. Large areas should be cured as trowelling progresses without waiting for completion of the entire area. In fast drying conditions, supplementary curing with polythene sheeting taped down at the edges must be used. In cold conditions, the finished repair must be protected from freezing.

Supply

SewperCoat® Wet Spray is supplied in 20kg Bag.

Coverage and yield

Approx 2.4 Tonnes per m³ (Approx 8.3L/20kg bag)

Limitations

SewperCoat® Wet Spray is a protective mortar lining system, care should be taken when considering use for structural applications. Please contact Parchem for further information.

Storage

SewperCoat® Wet Spray to be stored in dry conditions, off the ground. In this case, it will retain its properties for at least 6 months. In many instances, experience has demonstrated properties are retained for more than 1 year.

SEWPERCOAT

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