

Fosroc® Renderoc® CAC Wet Spray



constructive solutions

High performance mortar with superior biogenic corrosion resistance

Uses

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

Advantages

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

- Inhibits bacterial activity
- Neutralizes sulfuric acid
- Readily adheres to damp concrete
- Provides long term corrosion protection
- Contains no VOC's
- RCS (Respirable Crystalline Silica) Hazard Free*

Description

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

*Renderoc CAC Wet Spray is classified not hazardous for RCS in accordance with Australian Inventory of Industrial Chemicals; contains <0.1% RCS.

Properties

Compressive Strength (AS 1478.2 - 2005)	
7 hours	>20MPa
24 hours	>40MPa
28 days	>65MPa
Modulus of Rupture (Flexural Strength) (AS 1012.11-2000):	
24 hours	>4.5MPa
28 days	>7.5MPa
Indirect Tensile strength (AS 1012.10-2000):	
24 hours	>4.5MPa
28 days	>5MPa
Dimensional Change (Drying shrinkage) (AS 1012.13-2000):	
28 days	<600 microstrain
56 days	<700 microstrain

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

Application Instructions

Preparation

Prepare the surface to be sprayed to expose 50% diameter of the largest aggregate or a CSP of greater than 8.

The substrate should be saturated with clean water to achieve an SSD (saturated surface dry) state immediately prior to spray application of the Renderoc CAC Wet Spray.

Under no circumstances should the material be applied on a surface where running water is present.

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.

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

Note: minimum applied thickness of Renderoc CAC 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 Renderoc CAC Wet Spray. Please refer to the Renderoc CAC Wet Spray application guide for further information.

Application by hand trowel

The Renderoc CAC Wet Spray can 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.

Renderoc CAC Wet Spray can then applied by hand trowel at a min thickness of 25mm. Care should be taken not to overwork material.

Finishing

Renderoc CAC 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

Renderoc CAC 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 Renderoc CAC 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) is available from the Fosroc website. 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 Fosroc for further information about applying the material in temperatures above 35°C.

Curing

Renderoc CAC 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. Curing should commence as soon as the surface of the CAC has hardened. Which in some cases can be within 1 hour.

Initial curing should be via standard wet curing process (sprinkler, fog, wet hessian).

Once wet curing has taken place for 24 hours the CAC should be cured with a liquid applied curing compound such as Concure A99.

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.

Limitations

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

Supply

Renderoc CAC Wet Spray 20kg:	FC306062-20KG
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Yield

Approx 10.3 litres per 20kg bag

Storage

Renderoc CAC Wet Spray has a shelf life of 12 months in paper packaging and 18 months in plastic packaging if stored in dry conditions in the original, unopened bags.

Do not use if there are lumps in the product, or a loss of workability (requiring more water to be added) is experienced. If stored at high temperatures and/or high humidity conditions the shelf life will be reduced.



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Parchem Construction Supplies Pty Ltd

1956 Dandenong Rd Clayton VIC 3168

Ph: 1800 812 864

www.fosroc.com.au

ABN 80 069 961 968

Distributed in New Zealand by: Concrete Plus Ltd

150 Hutt Park Road Gracefield Ph: 0800 657 156

www.fosroc.co.nz

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