

# Struseal® C515

**Crystalline repair mortar used to repair non-moving cracks and damaged concrete**

## Uses

Used for repairing concrete structures, cracks, construction joints, tie holes, honeycombed concrete, large-scale repairs, masonry repairs, voids and other defects in concrete.

## Advantages

- Environmentally friendly.
- Ready mix dry mortar.
- Suitable for internal and external applications. • High-strength fine structure repair mortar.
- Resist hydrostatic pressure from either positive or negative surface of the concrete.
- Resistance to chemical attack.
- Protects reinforcing steel against corrosion.
- Active crystallization to seal cracks up to 0.5mm wide.
- Ideal for vertical and overhead concrete repairs.
- Can be skim coated or feather-edged.
- Non-toxic – ideal for potable water.
- Fast setting.
- Breathable, compatible with host concrete.
- Non-shrink and crack resistant.
- A single component that is easy to use needs only to be mixed with water before application.

## Standards compliance

Struseal C515 can be evaluated according to the requirements of EN 1504-3.

## Description

Struseal C515 is a high-strength concrete replacement mortar that is impermeable to pressurized water by crystalline waterproofing technology which is used to repair damaged areas of concrete, cracks, joints, tie holes, and honeycombed areas. Struseal C515 contains active materials to protect concrete against water, chloride, sulfate ingress, and any other chemical attack.

## Properties

Appearance	Gray or white Cementitious Powder	
Compressive strength (MPa) (ASTM C109/109M-02)	7 Days	40
	28 Days	55
Flexural strength (MPa) (BS6319, Part 3 : 1998)	7 Days	5
	28 Days	7.5
Bond Strength (MPa) (BS 1881, Part 207)	> 0.7	
Application temperature	5 - 40°C	
Water permeability (DIN 1048)	< 5 mm	

## Instructions for use

### Preparation:

It is essential that the substrate to be repaired is sound, clean and free of all contamination.

The damaged areas of concrete to be removed must be clearly identified. The Perimeter of the area should be saw cut to a depth of 10 mm and the edges cut as neatly as possible keeping the sides square.

Feather-edging is not permitted and a minimum thickness of 10 mm must be maintained over the whole area. The substrate should be prepared to provide a rough surface having at least 5 mm amplitude at 20 mm frequency.

If unsound or oil contaminated concrete is found to extend beyond the pre-marked area, consult the engineer in charge. Subject to approval cut back to clean sound concrete.

If reinforcement is corroded, ensure that the back of the steel has been exposed. Reinforcement should have all rust removed by the use of power tools, abrasive blasting (wet or dry) or wire brushing.

## Struseal C515

**Water Saturation:**

Thoroughly saturate the surface of the concrete to provide a saturated surface dry condition. Poor quality concrete may require soaking for a significant length of time. Any surface water should be removed using an oil free compressed air-jet.

**Mixing:**

Struseal C515 should be mixed mechanically with a Heavy Duty, slow speed drill or a forced action mixer fitted.

Add 3 liters of water into a suitably sized mixing vessel for full bag mixing. Do not use part-bags. It is suggested that the temperature of the water should not exceed 20°C, so that the temperature of the final mixed material is not greater than 30°C.

With the mixer in action, add one full bag of Struseal C515 and mix for 3 - 5 minutes, until the mix becomes fully homogeneous. (Water levels may be adjusted to allow good spray techniques between 3 & 3.5 liters per bag)

**Application:**

After mixing, Struseal C515 can be sprayed or trowel applied. When applying by hand, Struseal C515 must be forced tightly into the substrate to ensure intimate contact with the pre-wetted substrate.

Leveling and initial finishing should be carried using a wooden or plastic float. Final finishing should be carried out using a steel float.

When the material has stiffened to the point where finger pressure lightly marks the surface, a final firm troweling should be given using a steel float.

**Curing:**

Struseal C515 demands good curing. Particular care is required in hot/windy conditions. Curing is to be commenced immediately either by applying a single coat of Strubond® Acro7 or by covering the work with plastic sheet fixed over wet hessian and taped at all edges.

**Cleaning:**

Struseal C515 should be removed from tools and equipment with clean water immediately after use.

**Packaging**

Struseal C515 is available in 25 kg bags.

**Storage**

Struseal C515 has a minimum shelf life of 12 months at 20°C if kept in a dry store in the original, unopened packs. The shelf life will be reduced at higher ambient temperatures.

**Precautions****Health and safety:**

Struseal C515 is alkaline and should not come into contact with skin and eyes. Avoid inhalation of dust during mixing. Gloves, goggles and dust mask should be worn. If contact with skin occurs, wash with water. Splashes to eyes should be washed immediately with plenty of clean water and medical advice sought.

**Fire:**

Struseal C515 is non-flammable.

