



# SpECbuild S10

POLYMER MODIFIED DRY SPRAY REPAIR MORTAR

## DESCRIPTION

**SpECbuild S10** is supplied as ready to use blend of dry powders, which is formulated for application using the dry spray process. The material is based on cement, polymer modified with graded sands, silica fume and chemical additives.

## TYPICAL USES

**SpECbuild S10** is designed for large area repairs such as:

- Bridges
- Tunnels
- Retaining walls
- Dams

## ADVANTAGES

- Low rebound
- Rapid strength gain
- Low water absorption
- High resistance to carbon dioxide penetration
- Excellent bond to the concrete substrate
- Single component - ready to use
- No added caustic accelerators
- Contains no chloride admixtures

## TECHNICAL DATA

### Typical results @ 20 °C

#### Compressive strength (BS 6319-2)

1 day	22 N/mm <sup>2</sup>
3 days	55 N/mm <sup>2</sup>
7 days	65 N/mm <sup>2</sup>
28 days	80 N/mm <sup>2</sup>

#### Flexural Strength (BS 6319-3)

28 days	8 N/mm <sup>2</sup>
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#### Tensile strength (BS 6319-7)

28 days	3 N/mm <sup>2</sup>
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#### Water absorption ISAT (BS EN 1881-208)

10 minutes	0.025ml/m <sup>2</sup> /sec
30 minutes	nil

## Setting time (BS EN 196-3)

Initial	2.0 hours
Final	4.0 hours

## Linear shrinkage (ASTM C531-00)

7 days	0.060%
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## Fresh wet density 2290kg/m<sup>3</sup>

## APPLICATION

### Preparation

It is essential that adequate preparation is carried out prior to the application of **SpECbuild S10**. This preparation should ensure the removal of all grease, oil and loose material.

The area to be reinstated using **SpECbuild S10** should be cut back to a depth of at least 10mm. To avoid "feather edging", it is advisable to neatly delineate the repair boundary by saw cutting to a depth of 10mm.

All corroded steel should be completely exposed including the rear of the bar to enable thorough cleaning. It is recommended that grit blasting be used to clean the reinforcing steel and particular attention should be paid to the rear of the bar to ensure all corrosion products have been removed.

Once the reinforcing steel has been cleaned it should be coated immediately with one coat of **SpECcoat Zn25**.

### Substrate Priming

Normally, it will only be necessary to pre-soak the substrate with clean water for a period of at least one hour, prior to the application of the repair compound. Obviously all water should be drained from the formwork prior to commencing with the application of the repair material.

## Mixing

The mixing water used must be in the range of 3.0 litre to 3.5 litre. The quantity used will depend on the type of application and the skill of the applicator.

## Application

Exposed steel reinforcing bars should be firmly secured to avoid movement during the application process as this will affect mortar compaction, build and bond.

**SpECbuild S10** should be emptied from the bags directly into the hopper of the dry spray process machine. The amount of water added should be controlled by the nozzleman. too little water will increase rebound and dust emission, too wet a mix will slump.

If sagging occurs during application to vertical or overhead surfaces, the **SpECbuild S10** should be completely removed and re-applied at a reduced thickness on to the correctly reprimed substrate.

## Finishing

**SpECbuild S10** is finished by striking off with a straight edge and closing with a steel float. Wooden or plastic floats, or damp sponges may be used to achieve the desired surface texture. The completed surface should not be overworked.

## Curing

**SpECbuild S10** must be cured immediately after finishing in accordance with good concrete practices using wet hessian or polyethylene sheet.

## EQUIPMENT CLEANING

**SpECbuild S10** should be cleaned from equipment using water immediately after application. Cured material can only be removed mechanically.

**SpECcoat Zn25** should be cleaned from equipment using **SpECTop Cleaning Fluid**.

## PACKAGING & YIELD

**SpECbuild S10** 25kg bag  
@ typically 12.5 litre  
(0.0125m<sup>3</sup>) of mixed  
product depending on  
added water at nozzle

**SpECcoat Zn25** 1litre & 5litre tins  
@ 7-8m<sup>2</sup>/litre

## STORAGE & SHELF LIFE

**SpECbuild S10** has a shelf life of 12 months when stored in original packaging in a cool, dry environment.

## HEALTH & SAFETY

**SpECbuild S10** contains cement powders, which when mixed or become damp, release alkalis, which can be harmful to the skin. Avoid inhalation of dust and contact with skin and eyes. Gloves, goggles and a dust mask must be worn. If skin contact occurs, wash with plenty of soap and water. Contact with the eyes should be treated by immediately washing with copious amounts of clean water followed by medical attention. Do not induce vomiting.

## FLAMMABILITY

**SpECbuild S10** is not flammable.

**SpECcoat Zn25** and **SpECTop Cleaning Fluid** are flammable. Do not expose to naked flames or other sources of ignition.

## FLASH POINTS

**SpECcoat Zn25** >60 °C  
**SpECTop Cleaning Fluid** >40 °C

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## SPECIALITY ENGINEERING CHEMICALS

PO Box 61347, Dubai, United Arab Emirates. Telephone: +971 4 883 6662, Fax: +971 4 883 7696

E-mail: [info@spec.ae](mailto:info@spec.ae)

[www.spec.ae](http://www.spec.ae)