

# SETSEAL 1

## Waterproofing render and screed additive

TECHNICAL DATA SHEET PUBLISHED JUNE 2013

### PRODUCT FEATURES

Setseal 1 is a highly effective and easily dispersed water-repelling additive for sand /cement renders and screeds. The product is an aqueous dispersion of inorganic silicates. It is diluted with water before use and provides permanent waterproofing and reduced permeability of cement bound mixes throughout their entire mass.

The benefits of using Setseal 1 also include better resistance to chemical attack, increased frost resistance, and reduced efflorescence, all with no reduction in the strength. Setseal 1 may be used with Portland cement (ordinary and rapid hardening) and sulphate resisting cement.

Setseal 1 renders are applied in two, three or four coats depending on the water pressures involved and the type of structure.

Setseal 1 has also been used extensively for the waterproofing of basements, boiler houses, lift shafts, floors, retaining walls, swimming pools and water storage tanks.

### MATERIALS SUPPLIED

20 and 200 litre containers

### STORAGE

Protect from frost and store under dry warehouse conditions at a temperature between 10°C and 30°C.

### SHELF LIFE

12 months in unopened, undamaged, sealed containers and stored under good conditions.

### COVERAGE & YIELD

- For all uses, dilute Setseal 1 with ten parts clean water.

The following figures show the typical consumption of undiluted Setseal 1 for various applications:

|  |                                     |
|--|-------------------------------------|
| General waterproofer                                 | 1.5 litres per 50kg cement          |
| Wall render (damp)<br>(2 coats total 13mm)           | 1 litre for 2.5 - 3m <sup>2</sup>   |
| Wall render (water pressure)<br>(3 coats total 20mm) | 1 litre for 1.8 - 2.4m <sup>2</sup> |
| Wall render (heavy pressure)<br>(25mm thick)         | 1 litre for 1.2 - 1.5m <sup>2</sup> |

Floor topping  
(38mm thick)

1 litre for 1.0 - 1.5m<sup>2</sup>

### APPLICATION INSTRUCTIONS

#### SURFACE PREPARATION

Prior to application, all leaks and water jets must be stopped.

Substrates should be mechanically prepared by bush hammering, grit blasting etc, to produce a clean exposed aggregate finish, free from dust, oil, grease, paint, laitance, etc., in order to provide a 'key' for the Setseal 1 enhanced mortar.

The prepared substrate should be thoroughly dampened with clean water to minimise suction, ensuring there is no surface water present prior to application.

#### APPLICATION

For all applications it is necessary to dilute one part Setseal 1 with 10 parts clean water before use and to mix well to ensure it is uniformly dispersed. The cement : sand ratios supplied are by volume. The sand should be washed well-graded sharp sand, a maximum 3mm for the wall renders and a maximum 4.75mm for the main floor coat.

##### 1. General waterproofer for mortar

Setseal 1 can be used for all types of external renders, after diluting at 1:10 with the gauging water and used at approximately 1.5 litres per 50kg of cement

##### 2. Moisture and damp resistant render above DPC level

Apply a priming layer, not less than 6mm thick, over the entire surface, consisting of a 1:1 sand : cement mortar with Setseal 1. This should be of a fairly 'sloppy' consistency and cast onto the surface vigorously. After about 4-5 hours, once this coat has stiffened sufficiently, a second coat consisting of a 2½:1 sand : cement mortar with Setseal 1 should be applied at a thickness not less than 6mm and finished with a wooden float.

##### 3. Rendering to resist water pressure

To produce a render suitable for resisting water pressure in applications such as basements, tanks, swimming pools etc requires a three-coat treatment.

- 3.1. For the first coat apply a priming layer as in 2 above.

- 3.2. Apply a second coat consisting of a 1½:1 sand : cement mortar with Setseal 1 once the priming coat has stiffened sufficiently. Then prepare a similar mortar using only water and mix to a thin consistency, apply this over the entire previous coat to provide a key for the final coat.
- 3.3. The following day apply a third 6mm coat of a 2½:1 mortar with Setseal 1 and finish with a wood float.

In situations involving high water pressures, an additional render coat may be necessary. This would be a 1½:1 coat (6mm thick) applied on top of the priming coat as in 3.2.

#### 4. Floor Screeds

- 4.1. Thoroughly prepare the floor surface as described under Surface Preparation.
- 4.2. Prepare a grout consisting of a 1:1 mix of sand : cement with Setseal 1, gauged to a sloppy consistency and apply by brushing vigorously into the surface.
- 4.3. A bonding coat consisting of a 1:1 sand : cement mix with Setseal 1 to a plastic consistency is applied immediately to a thickness of 12mm and levelled with a trowel.

The main floor coat is applied immediately to the bonding coat and consists of a 1:2½ sand : cement mortar mix with Setseal 1, laid to a minimum thickness of 25mm. This gives a minimum overall screed thickness of 37mm. This coat should be of a semi-dry consistency and carried up the wall to meet the final render coat. After compacting well and when it has set sufficiently, it should be floated to a flat and even finish.

At floor/wall joints a corner fillet will help strengthen this area. Renders should be lapped down over this fillet and a cove formed with the final layer as shown on the diagram.

#### CURING

Setseal 1 screeds and renders are cement-based products and in common with all such materials must be cured in accordance with good concrete practice. Wet hessian combined with polythene sheeting is recommended to prevent rapid drying, for a minimum of 7 days.

#### PRECAUTIONS

Successive coats of mortar should be keyed in with a splatter coat rather than scratching the surface. This avoids possible damage which could lead to water penetration.

Do not place when the substrate temperature is below 10°C or when the ambient temperature is 10°C and falling. Protect from frost.

The use of a well-graded sharp sand is essential to forming good waterproof renders and screeds. Soft sand is not satisfactory and maximum size should be 3mm for renders and 5mm for screeds.

Do not mix lime or plasticisers with Setseal 1 mortars.

Thistle Multifinish or Limelight finishing plasters are suitable with Setseal 1. A grout mix of a 1:1 sand: cement mortar brushed immediately onto the surface of the final coat should be applied using plain water and allowed to cure.

To ensure water tightness, careful attention must be paid to all joints. Where joints occur, successive coats should be stepped back by at least 100mm from the previous coat to avoid any butt joints.

#### CLEANING

All equipment should be cleaned with water immediately after use.

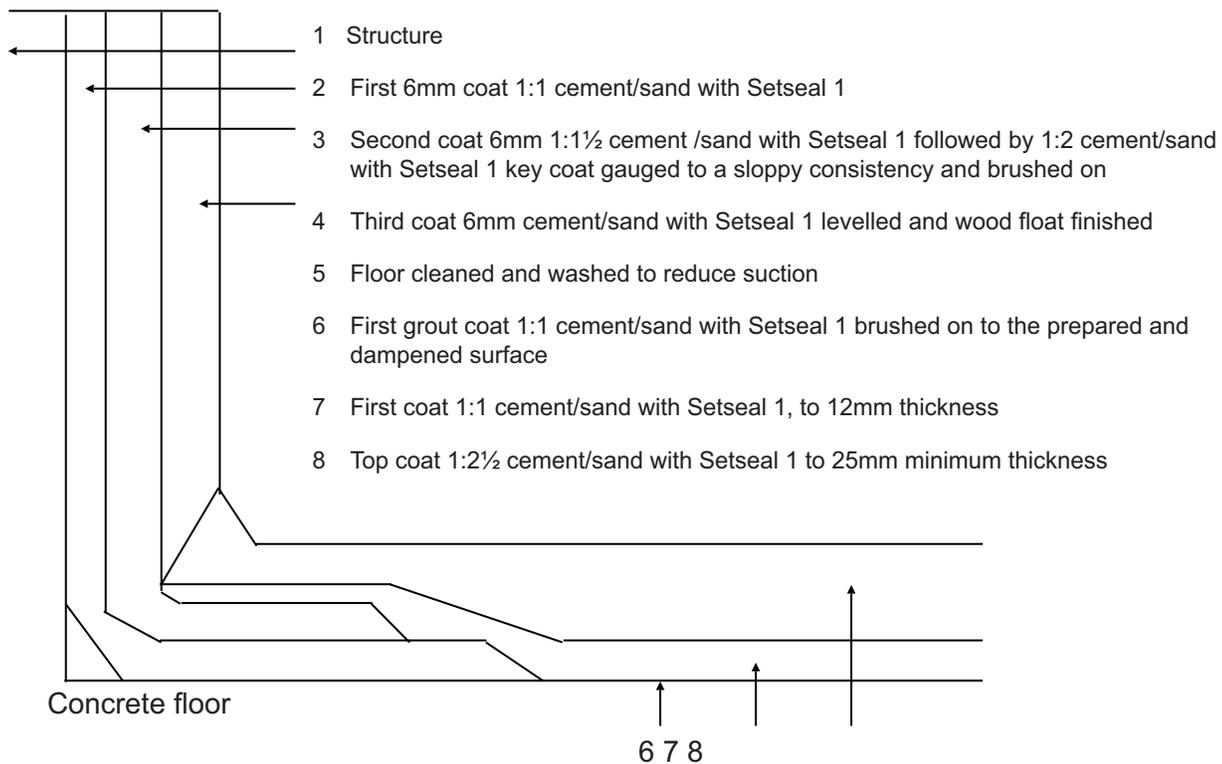
#### HEALTH AND SAFETY

Please consult the appropriate Material Safety Data Sheet prior to using Setseal 1.

#### GENERAL GUIDANCE

This data sheet is for general guidance purposes only and may contain information that is inappropriate for certain conditions of use. Accordingly, all recommendations and suggestions are made without guarantee. Further information is available from our Technical Department.

## CROSS-SECTION DETAIL



**Note:**

We endeavour to ensure that any information, advice or recommendation we may give in product literature is accurate and correct. However, because we have no control over where and how products are applied, we cannot accept any liability arising from the use of the products.

