

Summary of Application Instructions for Cementitious Self-Smoothing Screeds

Isocrete Self Level Flowscreed Industrial Top

These instructions should be read together with the relevant product data and safety data sheets.

Introduction

These screeds are all cement-based and protein free self-smoothing screeds which are laid generally by pump, but for small areas may be laid by hand.

Materials

The cementitious products and fillers are one pack pre-bagged, and are mixed with clean potable water.

Isocrete Primer (129Y) is usually used diluted.

Epoxy primers are supplied in pre-weighed packs of base and hardener. Do not split or proportion packs.

Note: Protect materials from frost, and store in dry conditions.

Site Inspection

Before screeding, the building must be weatherproof, with doors and windows fitted (or covered) so there is no possibility of rainwater ingress or excessive draughts.

All gaps must be sealed to prevent primer or screed from dripping through to floors below or running out at edges.

Levels

Where it is essential to keep within a specified level tolerance, especially on an uneven base, finished screed levels should be set by providing a grid of flat headed screws.

Base Preparation

Bonded Construction

Remove laitance and surface contamination by shot blasting or mechanical scabbling to cleanly expose the main aggregate. A satisfactory bond can be achieved to un-prepared concrete provided there is little laitance and the base is not contaminated with mud, plaster or any other dirt which might impair the bond. Remove dust and debris by vacuum immediately prior to screeding.



Old flooring adhesives

Existing floors (concrete or screed) that have had a previous floor finish removed must be grind or otherwise prepared to remove all old adhesives and levelling compounds.

Tiled bases

Ceramic tiles, quarry tiles, terrazzo and similar must first be checked for soundness and any loose or damaged tiles removed. Sound tiles are then to be cleaned with a grinder or floor sanding machine and vacuum cleaned.

Epoxy resin primers

Bases that are to be primed with Hydraseal, Flowprime or other epoxy or polyurethane primers must first be mechanically prepared by shotblasting.

Priming

On porous bases such as concrete or screed, use Isocrete Primer diluted at 1 part Primer to 3 parts clean potable water. Brush the Primer out over the floor with a soft broom. Avoid ponding of the Primer, any pools to be brushed out. Repeat the priming on very porous surfaces such as lightweight concrete or old, dry screeds.

On non-porous bases, such as tiles or terrazzo, and on dense power-floated concrete, the dilution of Primer should be 1 part Primer to 2 parts water.

Allow the Primer to dry before applying the screed. Under reasonable drying conditions on a concrete or screed base, the Primer may take 2 - 3 hours to dry.

Priming with epoxy and polyurethane primers

When using Hydraseal, Flowprime or any other epoxy or polyurethane primer, see the relevant product data sheet for detailed installation instructions.

Batching and Mixing - Pumped Application

Approved continuous mixers include:

CURA RTV-510
M-Tec PD100

Flow rates should always be checked at the discharge end of the hose.

Laying and Finishing - Pumped Application

The width of a bay being screeded should be limited to about 15 metres, with a temporary stop edge (of timber or self-adhesive foam strip).

As the application proceeds, areas of laid screed are finished by giving agitation to the screed surface. Suitable means of agitation include use of a spiked roller, a long handled spatula or a tamping bar, (a light timber or aluminium bar used just into the surface of the screed to agitate the material).

If a second layer is to be laid, to build up the thickness, prepare by grinding and re-prime the surface of the first layer (typically on the day after laying the first layer) and allow primer to dry before laying the second layer.



Batching and Mixing - Hand Application

Mix one bag of the material with the appropriate amount of water (see table) with a heavy duty electric drill and a helical mixer or plaster mixer, in a large bucket or tub. Mix thoroughly, for at least 2 minutes, to give a uniform smooth creamy material

Always put the water into the mixing tub before the powder. The volume of water can be gauged by measuring jug, but some flow tests should be carried out to check that the flow of the material is within the recommended values.

Do not exceed the recommended water addition.

Do not mix more material than can be applied within 10 minutes.

Laying and Finishing - Hand Application

Finish the screed with a steel trowel, but do not over-trowel as this can bring bleed water to the surface. A spiked roller may also be used if preferred.

Flow Test for Flowcrete Cementitious Self Levelling Screeds

Isocrete Self Level Flowscreed Industrial Top

Equipment

A cylinder, nominally 65mm diameter x 40mm high, to contain 133 cm³.

A glass plate, stainless steel or melamine board. (Glass is generally impractical on site).

A measuring tape or ruler.

A container to collect the screed sample.

Cleaning equipment (water and cloths).

Procedure

1. The equipment is to be clean and dry before carrying out the test.
2. The material to be tested is taken from the discharge end of the pump hose (or for hand application, from the container of mixed material before it is laid).
3. The plate is placed on a firm level surface.
4. The cylinder is placed roughly at the centre of the plate.
5. The sample is poured into the cylinder until the cylinder is full.
6. With a quick, vertical movement, the cylinder is lifted up off the plate and the sample allowed to spread out on the plate.
7. Within a minute, or so, the material will stop moving. The diameter of the circle of material is then measured in two directions approximately at right angles to each other. The average of the two readings is recorded as the test result.



Table Of Flow Rates and Water Contents

Material	Flow (mm)	Water/20kg
Industrial Top	230-250	3.1 litres
Self Level	230-250	4.0 to 4.5 litres

After Screeding

It may be found necessary to use a sanding machine (or hand stone) to remove any surface defects such as drip marks and to smooth across the line of temporary joints at bay edges and doorways.

Sanding is most easily done just one day after screeding before the material has gained its full strength, but may be left longer.

Curing

The area to be screeded must be weather-tight (i.e. all roofs, windows and doors are covered). The screed should be protected from draughts and strong sunlight during and for 24 hours after the screed is laid.

Trafficking

Access to the screed should be restricted for at least 12 (preferably 24) hours to prevent damage to the screed surface. Thereafter light foot traffic should be possible.

Normal site traffic and erection of partitions on the screed is permitted after the screed has hardened, typically 24 to 48 hours.

These times may be extended in cold weather.

Protection

The Isocrete Self Smoothing screeds are not intended to be a wearing surface and must therefore be protected, by suitable sheet material, in areas where it may be subjected to intensive or heavy use before the final floor finish is laid.

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