# Shieldfloor CMS100

**Cement-based, Trowel Applied, Heavy Duty Floor Screed with Thicknesses (30 – 100) mm**

TECHNICAL DATA SHEET

## Description

**Shieldfloor CMS100** is a single-component, cement-based screed, consists of a blend of specially selected cements, graded aggregates, polymers and additives. It is supplied as a dry, grey powder, only requires the addition of clean water on site. **Shieldfloor CMS100** is designed for floor applications, at thicknesses from 30 to 100 mm.

## Uses

- General screed works such as floor leveling and renovation.
- Floor leveling, prior to installation of tiles.
- Repair of damaged concrete.

## Characteristics / Advantages

- Factory-controlled, pre-blended dry mix, only requires the addition of clean water on site.
- Indoor and outdoor applications.
- Rapid development of strength.
- Shrinkage compensated.
- Excellent abrasion and weathering resistance.
- Chloride-free.

## Standard Compliance

EN 13813: CT-C40-F6-AR1.0

## Packaging

**Shieldfloor CMS100** is supplied in 25 kg bags.

## Shelf Life and Storage

**Shieldfloor CMS100** has a shelf life of 12 months when stored in original unopened packaging in cool and dry conditions, protected from direct sunlight, heat, and moisture. Shelf life may be reduced if the recommended conditions are not followed.

## Safety Instructions

**Shieldfloor CMS100** contains hydraulic cement and may cause irritation to skin or eyes. Refer to the most recent Material Safety Data Sheet for information and advice on the safe handling, storage, and disposal of the product

## Typical Properties

| | |
|---|---|
| Color / Appearance | Grey powder |
| Maximum Aggregate Size | 5 mm |
| Fresh Wet Density (@ 23°C) | 2.30 ± 0.05 g/ml |
| Working Time (@ 23°C) | 35 – 45 minutes |
| Full Set (@ 23°C) | 24 hours |
| Compressive Strength (EN 13892-2) @ 28 days | > 35 MPa |
| Flexural Strength (EN 13892-2) @ 28 days | > 6 MPa |
| Bond Strength (EN 1542) @ 28 days | > 2 MPa |

## Application Instructions

### 1. Surface Preparation

The substrate must be fully cured, sound, and free from dust, loose materials, surface contamination and materials that may reduce bond or prevent adhesion.

It is recommended to do light scabbling or grit blasting to provide a roughened key for the screed.

Concrete surface must be soaked with water to provide SSD condition. Poor quality concrete may require soaking for a significant time. Any excess water should be removed by suitable means prior to application.

### 2. Priming

To increase the bond of **Shieldfloor CMS100** to the substrate, prime the surface with **Shieldbond AB30** prior to application. Allow the primer to dry before application.

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## 3. Mixing

**Shieldfloor CMS100** requires 2.00 – 2.25 liters of potable water per 25 kg bag. For optimum results, mixing should be performed using a forced action mixing paddle, powered by a heavy-duty electric mixing drill.

Add the pre-measured amount of water to a clean mixing bucket. Add the **Shieldfloor CMS100** powder slowly to the water whilst mixing and continue mixing for 2 – 3 minutes until a homogenous, lump-free consistency is achieved. Allow the mixed material to stand for 1 – 2 minutes prior to use.

## 4. Application

Spread the mixed material onto the prepared/ primed surface. Allow the material to spread using a trowel or wooden float, at thickness of 50 mm in a single application, with higher thicknesses can reach up to 100 mm by multiple layers. Finish the surface by steel trowel with tamping to achieve smooth and fully compacted surface.

## 5. Cleaning

All mixing and application equipment should be cleaned immediately with clean water. Hardened material should be mechanically removed.

## 6. Curing

**Shieldfloor CMS100** is self-curing, but as with all cement-based products in hot weather or harsh conditions, take adequate measures to protect from exposure to direct sunlight or hot winds. Treat exposed surfaces with a curing compound or use other approved curing methods such as polyethylene sheeting or wet hessian.

## Consumption and Coverage (For 25 kg bags)

**Yield**: 11.5 Liters

**Consumption**: 2.15 kg/$m^2$/1 mm thickness
110 kg/$m^2$/50 mm thickness

**Coverage**: 11.5 $m^2$/ 25 kg bag at 1 mm thickness
0.20 $m^2$/ 25 kg bag at 50 mm thickness

## Limitations

- Do not apply the product if the ambient temperature is less than 5°C.
- Hot weather practices should be adopted during application and curing if the temperature is above 35°C. In hot conditions, store the material in a cool environment prior to application. Working area should be covered in case of harsh weather such as heavy rain, strong winds, dust, etc.
- Not to be used on floors known to suffer from rising damp, unless treated with a suitable damp-proof membrane.
- Do not exceed the maximum recommended water content and only use clean potable water.

## Technical Support

Refer to technical information, method statement, or contact technical support team for any inquiry.

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