# Shieldstone C

**Architectural, Precast Concrete Building Unit / Artificial Stone, Type C**

TECHNICAL DATA SHEET

## Description

**Shieldstone C** is an economical grade of cement-based synthetic stone, supplied as ready-to-use a blend of dry powders, and only requires the addition of clean water.

## Uses

- In the construction of residential and public buildings.
- In the construction of columns, walls, floors and bridges.
- Can be used for decoration purposes.
- Indoor and outdoor uses.

## Characteristics / Advantages

- Ease of installation.
- Economical grade.
- Resistant to weather, heat, and moisture.
- Suitable for both interior and exterior applications.
- Hard with a low absorption rate.
- Durable and long-lasting.
- Can be casted in different shapes.

## Packaging

**Shieldstone C** is supplied in 25 kg bags.

## Shelf Life and Storage

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

## Safety Instructions

**Shieldstone C** contains hydraulic cement and may cause irritation to the skin or eyes. For further information, refer to the Material Safety Data Sheet.

## Typical Properties

| | |
|---|---|
| Color | White |
| Bulk Density (23 °C) | 2.18 g/ml |
| Absorption Rate | 9% |
| Working Time | 20 minutes |
| Setting Time | Initial: 2 – 3 hours<br>Final: 3 – 5 hours |
| Compressive Strength (ASTM C109) @ 28 days | > 25 MPa |
| Modulus of Rupture | > 3 MPa |

Technical information corresponding to the data was obtained at 23 °C (± 2°C) temperature and 50 ± 5% relative humidity.

## Consumption and Coverage

Based on the size of the molds.

## Application Instructions

### 1. Mixing

**Shieldstone C** requires (1.5 – 2.0) liters of clean water per 25 kg bag.

For optimum results, mixing should be performed using a forced-action high-shear mixing paddle, powered by a heavy-duty electric mixing drill.

Add the **Shieldstone C** powder slowly to the water whilst mixing and continue mixing for 2 – 3 minutes until a smooth, homogenous, lumps-free consistency is achieved.

Allow this mixture to stand for 1 – 2 minutes and then re-mix for another 1 – 2 minutes prior to use. Do not add additional water to the mix.

## 2. Application

Prior to application, prime molds with a water-based mold release agent, **Shield Easymold WB,** according to the instructions in the datasheet.

The mixed material of **Shieldstone C** should be filled by means of a metallic trowel or other similar appropriate tools inside molds to get the required shape. Vibrate and tap the sides of the molds lightly to remove any entrapped air bubbles.

After the curing period, inspect the samples for any defects. The artificial stone can be fixed on facades using **MICShield** range of tile adhesives to ensure excellent adhesion. **Shieldgrout SPM** should be used to fill the gaps between stones. Molds can be deshuttered after 24 – 48 hours of casting.

## 3. Cleaning

Tools should be cleaned immediately with clean water. Hardened material should be removed mechanically.

## 4. Curing

Curing normally takes 28 days. The stones should be carefully removed from the molds after 2 or 3 days of casting and kept in a cool, dry place, away from direct sunlight to prevent any damage or deterioration. The samples should be sprayed with water, once every 48 hours, to ensure sufficient curing.

## Limitations

- Do not exceed the maximum recommended water content and only use clean potable water. The water ratio depends on the type and water absorption rate of the aggregates.
- Variations in the used aggregates can affect the final product's color.
- The product's strength is influenced by the type of aggregates used.

## Technical Support

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

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