

## MONOCRETE WP 1000

**Liquid waterproofing admixture for concrete and mortar**

### Description

**MONOCRETE WP 1000** is Liquid waterproofing admixture for concrete and mortar formulated from selected polymers specially designed to reduce water permeability by reducing capillary voids, which will last for the life of the concrete and mortar.

The presence of water in hardened concrete can cause corrosion of reinforcement which is made severe by freezing and thawing of concrete containing absorbed moisture.

Further deterioration can occur if the water penetrating the concrete contains dissolved aggressive salts.

### Applications

**MONOCRETE WP 1000** is a waterproofing admixture for use in all cement based mortars, screeds and concrete.

### Advantages

- Improves durability by minimizing penetration of moisture and water based chemicals.
- No additional water into dry or semi-dry mixes.
- Reduces efflorescence and pigment leaching from cement mortars.
- Chloride free.
- Improves plasticity cohesion.
- Better compaction and finishing.

### Compatibility

**MONOCRETE WP 1000** can be used with all types of Portland cement and cement replacement materials.

**MONOCRETE WP 1000** is compatible with other STARKE admixtures used in the same concrete mix.

If more than one type of admixture is to be used in concrete mix, they must be dispensed to the concrete separately.

### Standards

**MONOCRETE WP 1000** complies with ASTM C494, Type A and IS 2645.

### Technical Properties

**Colour:** Brown liquid

**Freezing point:**  $\approx -2^{\circ}\text{C}$

**Specific gravity:**  $1.18 \pm 0.01$

**Chloride content:** Nil

#### BS 5075

**Air entrainment:** Typically less than 2% additional air is entrained above control mix at normal dosages

### Test Results:

**Mix proportions:** 1:2:4

**Dosage:** 0.25 ltr/50 kg cement  
Control WP

**Water/cement ratio:** 0.54 0.49

**Slump:** 65 mm 65 mm

**Compressive strength:** 42.40 MPa 43.60 MPa  
**@ 28 days**

Representative trials should be conducted to determine the optimum dosage of **MONOCRETE WP 1000** to meet the performance requirements by using the materials and conditions in actual use.

### Permeability:

The permeability measurements as per BS 1881, Part 5:1970 has been carried out on samples of mortar using **MONOCRETE WP 1000** to determine the waterproofing efficiency of **MONOCRETE WP 1000**.

#### Permeability (ml/m<sup>2</sup>/s)

	10 min	30 min	60 min
<b>Control:</b>	11.6	6.8	3.4
<b>MONOCRETE WP 1000</b>	4.8	2.9	1.6

## Method of Use

etcrete RMW should be added to the concrete or mortar with the mixing water to achieve optimum performance.

An automatic dispenser should be used to dispense the correct quantity of **MONOCRETE WP 1000** to the concrete mix.

## Dosage

The guidance dosage of **MONOCRETE WP 1000** is 0.15 - 0.25 litre per 50 kg of cementitious materials in the mix, including GGBFS, PFA or microsilica within this dose, water content can be reduced by 10 - 15% due to the plasticising action of **MONOCRETE WP 1000**.

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## Effects of Over Dosage

**Over dosing of MONOCRETE WP 1000 will cause the following:**

- Significant increase in retardation.
- Increase in workability.

Ultimate concrete strength will not be adversely affected and will generally be increased provided that proper concrete curing is maintained.

## Points to be considered in water-proof concrete

- Lower water to cement ratio gives lower permeability concrete.
- Good concrete placing and compaction are very important to produce waterproof concrete.
- Fresh concrete should be protected against rapid drying and cured properly.
- Cold joints must be avoided.

## Cleaning

**MONOCRETE WP 1000** can be washed with fresh cold water.

## Packaging

**MONOCRETE WP 1000** is available in 150 ml, 1, 5, 20 litre pails, 250 kg drums and 1000 litre bulks supply.

## Storage

**MONOCRETE WP 1000** has a shelf life of 12 months from date of manufacture if stored at temperatures between 2°C and 50°C. If these conditions are exceeded, STARKE Technical Department should be contacted for advice.

## Cautions

### Health and Safety

**MONOCRETE WP 1000** is not classified as hazardous material. **MONOCRETE WP 1000** should not come into contact with skin and eyes.

In case of contact with eyes wash immediately with plenty of water and seek medical advice promptly. For further information refer to the Material Safety Data Sheet.

## Fire

**MONOCRETE WP 1000** is nonflammable.

More from starke construction chemicals A wide range of construction chemical products are manufactured by STARKE which include:

**Concrete admixtures.**

**Surface treatments**

**Grouts and anchors.**

**Concrete repair.**

**Flooring Coating**

**Sealants.**

**Waterproofing.**

**Adhesives.**



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