

# Idrocrete WP

## High-performance, hydrophobic, pore-blocking, integral waterproofing admixture for concrete

### WHERE TO USE

**Idrocrete WP** is especially recommended for all concrete structures which require reduced water absorption and reduced permeability. It increases the watertightness of concrete, thus enhancing durability. **Idrocrete WP** is used for under-ground structures as well as above-ground structures which require waterproofing properties.

### Some application examples

- Foundation structures.
- Underground structures (basements, retaining walls, tunnels, lift wells, ditches).
- Sewage treatment tanks, cisterns, canals, etc.
- Swimming pools, storage tanks.
- Roof decks, bridge decks.
- Precast concrete.

### TECHNICAL CHARACTERISTICS

**Idrocrete WP** is a specially blended, chloride-free admixture with active organic agents which, when added to fresh concrete, reacts with its constituents to improve the water-tightness of the cured concrete through hydrophobic effects and reduced capillary porosity.

**Idrocrete WP**, has plasticising effects, allowing a reduction in the mix water of about 10% without affecting workability, leading to increased concrete density and strength.

**Idrocrete WP** is compatible for use with all types of

Portland cements and cement replacement materials such as PFA, GGBS and microsilica.

**Idrocrete WP** can be used in combination with most plasticiser/retarders and superplasticisers to produce concrete with good workability characteristics for easy placing and compaction, subject to the results of trial mixes.

### RECOMMENDATIONS

- The concrete must have a minimum binder content of 350kg/m<sup>3</sup> with a maximum water/binder ratio of 0.5.
- Mix designs must be confirmed by trials with the actual materials (cement, sand, aggregates, admixtures) to verify the properties of the concrete.
- For complete water-tightness of the structure, all joints must be properly detailed and treated with the **Idrostop** range of products.
- Good concreting practice for placing, compaction and curing must be followed at all times.
- **Idrocrete WP** is used to produce concrete with very low permeability which remains breathable. Therefore, where impermeable flooring finishes are to be applied (eg. resin flooring), a suitable under-layment such as **Triblock TMB** is required.
- Do not overdose **Idrocrete WP**. Doing so may lead to delayed setting.

### APPLICATION PROCEDURE

**Idrocrete WP** shall be measured and dosed using a suitable dispenser.

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For best results, **Idrocrete WP** is dosed in with the mixing water.

## **CONSUMPTION**

### **Dosage by volume:**

0.7 to 1.5 litres of **Idrocrete WP** for every 100 kgs of cement.

## **PACKAGING**

**Idrocrete WP** is available in 20 litre pails and 210 litre tanks.

## **STORAGE**

Stored in unopened containers, **Idrocrete WP** is stable for at least 12 months. Protect from frost and sunlight.

## **SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION**

For further and complete information about the safe use of our product please refer to our latest version of the Material Safety Data Sheet.

PRODUCT FOR PROFESSIONAL USE.

## **WARNING**

*Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.*

Please refer to the current version of the Technical Data Sheet, available from our website [www.mapei.com](http://www.mapei.com)

**All relevant references  
for the product are available  
upon request and from  
[www.mapei.com](http://www.mapei.com)**

**TECHNICAL DATA (typical values)****PRODUCT IDENTITY**

<b>Consistency:</b>	liquid
<b>Colour:</b>	brown
<b>Density at 20°C(kg/litre):</b>	1.10 ± 0.05 at 20°C
<b>Chloride content (BS5075):</b>	nil

**TEST RESULTS (Report ref. MML/6061 dated 8 Jul 2013)**

<b>Concrete mix design reference:</b>	<b>TM001 (Control)</b>	<b>TM002 (with Idrocrete WP at 0.7 litres per 100 kg of cement)</b>	<b>TM003 (with Idrocrete WP at 1.5 litres per 100 kg of cement)</b>
<b>Cement content, OPC (kg/m<sup>3</sup>) :</b>	370	370	370
<b>Sand/aggregate ratio :</b>	0.45	0.45	0.45
<b>Idrocrete WP (litres/m<sup>3</sup>):</b>	-	2.590	5.550
<b>Superplasticiser (litres/m<sup>3</sup>):</b>	2.405	2.405	2.405
<b>Retarder (litres/m<sup>3</sup>):</b>	1.480	1.480	1.480
<b>Water/cement ratio:</b>	0.49	0.46	0.44
<b>Initial slump, (mm):</b>	120	120	100
<b>Compressive strength (BS1881:Pt 116:1983)(N/mm<sup>2</sup>):</b> - 3-days - 7-days - 28-days	29.5 37.0 40.5	35.5 41.5 51.0	36.0 48.0 52.5
<b>Water absorption, 30mins (BS 1881:Pt 122:1983)(%):</b>	3.0	1.2	0.8
<b>Water permeability, 3 days at 5 bars (DIN 1048:Part 5)(mm):</b>	59	44	26

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**BUILDING THE FUTURE**

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