



# Conplast® W

## Accelerating admixture for unreinforced cement concrete/mortar

### Uses

As an accelerator for use in concrete and cement mortar to give rapid strength development for early stripping of formwork and to help resist the effects of frost. Ideal for winter working.

### Advantages

- Allows continued placing of concrete at low temperatures.
- Gives additional frost protection by reducing the low water content and accelerating hydration of cement
- Enables earlier release from precast moulds thus speeding production
- Reduces the water content of concrete or mortar without loss of workability
- Reduces segregation and increases density and compressive strength
- Accelerates the hardening of floors and screeds.

### Standard compliance

Conplast W complies with BS 5075 Part 1 and ASTM C494, Type C.

### Description

Conplast W is supplied as a brown liquid. When added to cementitious mixes it accelerates hydration and enables the water content to perform more efficiently by dispersing agglomerated cement particles. This further improves strength by enabling water reduction to be made at constant workability.

Where there is embedded or prestressed steel, or where sulphate resistant cement is used or when steam curing is employed, Conplast W should be replaced by Conplast NC chloride free accelerating concrete admixture. For advice in specific situations please contact Fosroc technical staff.

### Technical Support

Fosroc offers a comprehensive range of high performance, high quality concrete repair and construction products. In addition, Fosroc offers technical support service to specifiers, end-users and contractors, as well as on-site technical assistance in locations all over the country

### Properties

**Specific gravity :** 1.30 - 1.31 at 30°C

#### Chloride content :

At the maximum recommended rate of addition, 3.4 litres/ 100 kg of cement, the Chloride ion concentration is 0.9% by weight of cement.

In unreinforced concrete containing no embedded metal, Conplast W, at the recommended dosage rates may be used.

**Air entrainment :** General less than 1% additional air.

#### Compatibility with other admixtures :

Conplast W is compatible with other Fosroc admixture but should be added separately to the mix. Reduced air content may result when Conplast W is used in conjunction with some air entraining agents. Consult Fosroc if other admixtures are to be used.

#### Compatibility with other cements :

Conplast W is compatible with ordinary and rapid hardening portland cement but not high alumina or sulphate resisting cements.

#### Workability :

The addition of Conplast W without reduction of the water content increases the slump and significantly improves concrete flow characteristics without decrease in concrete strength.

#### Setting times :

Typical results using Conplast W are given in Table 1.

**Table 1**

Mix	W/C ratio	Setting times(BS 5075) @ 20°C	
		Initial set	Final set
Control	0.59	4 hrs.45 mins.	6 hrs.30min.
Conplast W	0.55	1 hr. 30 mins.	3 hrs.

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## Mix details:

OPC		300 kg
Sand zone M	(BS 882)	35%
10mm gravel aggregate	(BS 882)	15%
20mm gravel aggregate	(BS 882)	50%
Conplast W		3.4 litres/100 kg cement

## Compressive strengths :

Typical performance with Conplast W is given in Table 2

	Admixture	Dosage / litre 100 kg OPC	W/C ratio	Compressive strength N/mm <sup>2</sup>			
				1 day	3 days	7 days	28 days
20°C	None	-	0.59	10.0	-	34.7	42.0
	Conplast W	3.4	0.55	22.2	-	49.7	57.6
19°C	None	-	0.65	5.6	15.2	28.1	38.6
	Conplast W	1.7	0.60	7.9	19.2	32.9	41.6
5°C	None	-	0.65	-	5.4	16.7	30.9
	Conplast W	1.7	0.60	-	8.0	21.0	35.9
2°C	None	-	0.65	-	3.6	12.8	26.1
	Conplast W	2.6	0.60	-	7.2	19.3	32.0

Mix details as for Table 1, slump 50mm.

## Application instructions

### Dosage

#### Additional rate per 100 kg cement

Above 4°C	
Concrete & mortar	1.0 litre
Granolithic floor toppings	1.7 litre
Blocks	1.7 - 3.4 litre, depending on conditions
From 4°C to - 2°C	2.6 litre
Below - 2°C	3.4 litre, at which rate concrete or mortar will be protected to - 5°C

## Overdosing

Overdosing will give increased acceleration and workability. Entrained air may increase slightly.

## Dispensing

The correct quantity of Conplast W should be measured by means of a recommended dispenser.

Consult Fosroc office or representative for advice regarding suitable equipment and its installation.

The measured quantity of Conplast W should be added directly to the mixer, preferably at the same time as the mixing water.

## Curing

Normal good curing practice should be adopted.

## Cleaning

Spillages of Conplast W can be removed with water.

## Estimating

## Packaging

Conplast W is supplied in 5, 20 & 200 litre drums.

## Storage

Minimum of 12 months shelf life provided the temperature range has not exceeded 2°C to 50°C.

## Precautions

## Health and Safety

Skin contact should be avoided as the material is slightly acidic. Any splashes should be washed well with water. If contact with eyes occurs irrigate immediately with water and medical advice sought.

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## **Fire**

Conplast W is water based and non - flammable.

## Additional information

Technical data and guidance can be provided on a wide range of admixtures and concreting aids including plasticisers, retarders, waterproofers, mould release agents, surface retarders and repair materials.

In addition, a wide range of complementary products are available. This includes joint sealants, waterproofing membranes, grouts and anchors and specialised flooring materials.

Separate datasheets are available on these products

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## Important note :

Fosroc products are guaranteed against defective materials and manufacture and are sold subject to its standard terms and conditions of sale, copies of which may be obtained on request. Whilst Fosroc endeavours to ensure that any advice, recommendation specification or information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products whether or not in accordance with any advice, specification, recommendation or information given by it.

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