Conplast® NC

constructive solutions

Chloride free accelerating, water reducing admixture

Uses

To accelerate the setting and early strength gain of Portland cement concrete and mortar mixes without the introduction of chloride. Acts as a plasticiser, so gives significant increases in both ultimate and early strengths. Typical applications include precast concrete, concrete placed in cold weather, concrete for repairs, mortars for brickwork.

Advantages

- Chloride free, safe in prestressed and reinforced concrete
- Produces exceptionally high early strengths
- Plasticising action gives increased workability and / or increased strengths
- Early setting improves frost resistance
- Suitable for bricklaying mortar mixes
- Particularly effective in concrete at low temperatures

Description

Conplast NC is guaranteed completely free of all forms of chloride and is supplied as a light straw coloured liquid.

The main active ingredient is an inorganic formate

Standard compliance

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

Properties

Specific gravity : 1.260 - 1.270 at 30^0C

Freezing point : -16^0C

Chloride content : Nil to BS 5075

Air entrainment : Less than 1%

Compatibility with cements : May be used with all types of Portland cements. Not suitable for use with high alumina cement

Acceleration : The addition of Conplast NC to Portland cement concrete mixes accelerates both the setting and rate of strength gain. The strength improvements are most significant during the first 18 hours.

Long term effects : Accelerated corrosion testing of steel in concrete has shown that Conplast NC does not affect the protection of steel afforded by cement against corrosion even at four times the normal dose level.

Application instructions

Dosage

The recommended dosage range for standard concrete and mortar mixes with all grades of Portland cement is 2.0 to 3.0 litres per 100 kg cement (see table).

Over dosage

An overdose of double the recommended amount of Conplast NC will result in a slight increase in initial acceleration, but will not materially alter the ultimate strength or characteristics of the cured concrete or mortar.

Mixing

Conplast NC should be stirred before use.

Dispensing

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

The company's technical department should be consulted regarding suitable equipment and its installation.

Conplast NC should be added direct into the mixer. Best results are obtained when added at the same time as the mixing water.

Curing

Concure WB, curing membrane or alternative methods such as polythene, water spray or wet hessian should be used.

Cleaning

Spillages of Conplast NC can be removed with water.

Estimating

Packaging

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

Storage

Minimum shelf life of 12 months in unopened containers under normal warehouse conditions.

Conplast® NC

Typical effect of Conplast NC on strength gain :

Curing Temperature	Conplast NC Dosage Litres/100kg	Initial set (BS 5075) hrs.	Final set (BS 5075) hrs.	Compressive strength(N/mm²) 10hrs	18hrs	24hrs	3Days	7Days	28Days
5°C	NIL	14	19	-	-	1.5	5.5	17	32
	2.5	12	17	-	0.5	3.0	10	20	36
10°C	NIL	4	06	-	-	2.5	08	20	35
	2.5	3	4 ½	-	2.0	4.5	13	24	40
20°C	NIL	3	4	1.0	4.5	6.0	17	29	43
	2.5	2	3	3.5	9.0	11.0	24	36	48

Precautions

Health and Safety instructions

Conplast NC is toxic. Do not ingest. If ingested, give an emetic of common salt in water and seek immediate medical attention. Prolonged contact with skin should be avoided. Any splashes should be washed well with water. The use of rubber gloves and safety glasses is recommended. Any splashes on eyes should be flushed immediately with plenty of clean water and medical treatment sought.

Fire

Conplast NC is non flammable. But, should be stored away from combusitible materials.

Additional information

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

Separate data sheets are available on those products.

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