

FASTCURE PBL-101

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 mould 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

FASTCURE PB-100 complies with BS 5075 Part 1 and ASTM C494, Type C.

● Description:

FASTCURE PB-100 is supplied as a green 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, FASTCURE PB should be replaced by FASTCURE PB-100 chloride free accelerating concrete admixture.

● Properties:

Specific gravity: 1.30 - 1.31 at 300C

Chloride content: At the maximum recommended rate of addition, 3.4 liters/100 kg of cement, the Chloride ion concentration is 0.9% by weight of cement. In unreinforced concrete containing no embedded metal, FASTCURE PB, at the recommended dosage rates may be used.

Air entrainment: General less than 1% additional air.

Compatibility with other admixtures: FASTCURE PB-100 is compatible with other ARROTILE admixture but should be added separately to the mix. Reduced air content may result when FASTCURE PB-100 is used in conjunction with some air entraining agents. Consult ARROTILE if other admixtures are to be used.

Compatibility with other cements: FASTCURE PB-100 is compatible with ordinary and rapid hardening Portland cement but not high alumina or sulphate resisting cements.

Workability: The addition of FASTCURE PB-100 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 FASTCURE PB-100 are given in Table 1.

MIX	W/C Ratio	Setting Time @ 20°C	
		Initial Set	Final set
Control	0.59	4 hr 45 Mins	6 hr 30 mins
Fastcure PB 100	0.55	1 hr 30 Mins	3 Hrs.

● Mix details:

OPC	300 kg
Sand zone M	35%
10mm gravel aggregate	15%
20mm gravel aggregate	50%
FASTCURE PB-100	3.4 liters/100 kg cement

● Compressive strengths:

Typical performance with FASTCURE PB-100 is given in Table 2

Temp	Admixture	Dosage/ liter	W/c ratio	Compressive strength N/mm ²			
				1d	3d	7d	28d
20°C	None	--	0.59	10.0	-	34.7	42.0
	Fastcure PB-100	3.4	0.53	22.2	-	49.7	57.6
19°C	None	--	0.65	5.6	15.2	28.1	38.6
	Fastcure PB-100	1.7	0.58	7.9	19.2	32.9	41.6
5°C	None	--	0.65	--	5.4	16.7	30.9
	Fastcure PB-100	1.7	0.59	--	8.0	21.0	35.9
2°C	None	--	0.65	--	3.6	12.8	26.1
	Fastcure PB-100	2.6	0.60	--	7.2	19.3	32.0

Mix details as for Table 1, slump 50mm

● Application instructions Dosage

Above 4°C Concrete & mortar Granolithic floor toppings Blocks	Additional rate per 100 kg cement 1.0 liter 1.7 liter 1.7 - 3.4 liter, Depending on conditions
From 4°C to -2°C	2.6 liter
Below - 2°C	3.4 liter, 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.

● Curing:

Normal good curing practice should be adopted.

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● Dispensing:

The correct quantity of FASTCURE PB-100 should be measured by means of a recommended dispenser. Consult ARROTILE office or representative for advice regarding suitable equipment and its installation. The measured quantity of FASTCURE PB-100 should be added directly to the mixer, preferably at the same time as the mixing water.

● Cleaning:

Spillages of FASTCURE PB-100 can be removed with water.

● Packaging:

FASTCURE PB-100 is supplied in 250 Kg drums.

● Storage:

Minimum of 12 months shelf life provided the temperature range has not exceeded 20°C to 50°C.

● 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.

● Fire:

FASTCURE PB-100 is water based and non - flammable.

● Note:

ARROTILE products are guaranteed against defective materials and manufacture and are sold subject to its standard terms and conditions of sale,

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