

FASTCURE PBL

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

● Description:

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

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

Workability: The addition of FASTCURE PB 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 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 | 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 | 3.4 liters/100 kg cement |

● Compressive strengths:

Typical performance with FASTCURE PB 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 | 3.4 | 0.55 | 22.2 | - | 49.7 | 57.6 |
| 19°C | None | -- | 0.65 | 5.6 | 15.2 | 28.1 | 38.6 |
| | Fastcure PB | 1.7 | 0.60 | 7.9 | 19.2 | 32.9 | 41.6 |
| 5°C | None | -- | 0.65 | -- | 5.4 | 16.7 | 30.9 |
| | Fastcure PB | 1.7 | 0.60 | -- | 8.0 | 21.0 | 35.9 |
| 2°C | None | -- | 0.65 | -- | 3.6 | 12.8 | 26.1 |
| | Fastcure PB | 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 40C 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 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 should be added directly to the mixer, preferably at the same time as the mixing water.

● Cleaning:

Spillages of FASTCURE PB can be removed with water.

● Packaging:

FASTCURE PB 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 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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