

Hyperplast Ultra 100

Special hardening accelerator for cementitious materials (Formerly known as Hyperplast Fast)



Description

Hyperplast Ultra 100 is a chloride-free special nano technology hardening accelerator, formulated to improve cement hydration process of early ages (6 - 18 hrs) at low and normal temperature with no effect on ultimate strength.

Advantages

- ▲ Accelerating early strength at different curing temperatures.
- ▲ Shortening CSH (calcium silicate hydrate) formation time using nano particles.
- ▲ In precast industry increasing early strength allows faster rotation of molds to increase production per day.
- ▲ Lower risk of delayed ettringite formation.
- ▲ Earlier stripping and reuse of forms increases labor productivity.

Compatibility

Hyperplast Ultra 100 can be used with all types of Portland cement and cement replacement materials. Hyperplast Fast is compatible with other DCP admixtures when used in the same concrete mix.

Hyperplast Ultra 100 has minimal plasticizing effect and needs to be used with other water reducing admixtures to achieve required consistency.

If more than one type of admixture is to be used in the concrete mix, they must be dispensed to the concrete separately.

Method of Use

Hyperplast Ultra 100 can be added to the mixing water prior to its addition to the concrete mix, or dispensed separately after the addition of mixing water.

Dosage

The guidance dosage of Hyperplast Ultra 100 is 1.5 to 3.5 litre per 100 kg of cementitious materials in the mix, including GGBFS, PFA or microsilica.

Technical Properties @ 25°C:

| | |
|------------------------------|-------------|
| Colour: | Milky |
| Specific gravity: | 1.21 ± 0.03 |
| Chloride content: BS 5075 | Nil |

Trials should be conducted to determine the optimum dosage of Hyperplast Ultra 100 to meet the performance requirements by using the materials and conditions in actual use.

| Temperature °C/°F | Testing time | Enhancement in Compressive strength compared to control sample |
|----------------------|--------------|---|
| 1/33 | @ 18 hr | 115% |
| 10/50 | @ 12 hr | 180% |
| | @ 18 hr | 115% |
| 25/77 | @ 6 hr | 425% |
| | @ 8 hr | 365% |

*Notes: 450 kg/ m³, Portland Cement CEM I 52.5 N, w/c for trials ranges from 0.30 to 0.35
Hyperplast Ultra 100 dosage used was 2.7 - 3.0 ltr per 100 kg of cementitious materials in the mix.*

Cleaning

Hyperplast Ultra 100 can be washed with fresh cold water.

Packaging

Hyperplast Ultra 100 is available in 210 litre plastic drums and 1000 litre bulks supply.

Storage

Hyperplast Ultra 100 has a shelf life of 12 months from date of manufacture if stored at temperatures between 2°C and 50°C.

If these conditions are exceeded, DCP Technical Department should be contacted for advice.

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Cautions

Health and Safety

For further information refer to the Material Safety Data Sheet.

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- ▲ Waterproofing.
- ▲ Adhesives.
- ▲ Tile adhesives and grouts.
- ▲ Building products.
- ▲ Structural strengthening.


Note:

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