

FEBFLOW ACCELERATING **ACCELERATING WATER REDUCER/PLASTICISER FOR** **CONCRETE (CHLORIDE BASED)**

Description:

Febflow Accelerating is basically the same as FEBFLOW STANDARD but contains additional chemicals to accelerate the setting time of the cement. Febflow Accelerating Concrete Plasticiser is a job-proven carefully formulated combination of a water-reducing agent with the addition of two accelerating components. Febflow Accelerating had been successfully used in winter conditions on major civil engineering contracts, as well as being approved and specified by leading authorities.

The chemical effect results from the combination of the calcium chloride and the cement during the hydration process, resulting in the formation of slightly different hydration products, primarily characterized by high early strength. This strength acceleration is accentuated by the action of the organic catalyst.

The physical effect is two-fold, being on the one part due to the benefit of water reduction and on the other part as a result of the discreet entrainment of air. The increased strength on account of the reduced water makes the concrete more resistant to low temperatures and the air cells give a degree of immunity to frost damage not to be found in an untreated concrete. Febflow Accelerating complies with NZS 3113 Type WRC.

Primary Uses:

The effect of Febflow Accelerating on the properties of the concrete is:

- To increase the early period rate of setting and hardening.
- To reduce the water content for a given workability.
- To increase strength at all ages.
- To increase resistance to freezing and thawing cycles.

Typical Applications:

1. In winter concreting.
2. In all concrete requiring high early strength.
3. To speed-up concreting in formed or moulded concrete by allowing earlier stripping.
4. To use with normal Portland cement as an alternative to rapid hardening Portland cement.
5. In floor slabs or road and runways paving's it provides the means of finishing earlier and prevents costly delays.

Compatibility:

Can be used with either normal or rapid-hardening Portland cement. Should not be used with high-alumina cement or cements already containing an accelerator: nor in mixes where an admixture containing calcium chloride is being used. In the case of sulphate-resisting Portland cement it is advisable before used to enquire from the cement manufacturer.

When used in the recommended quantities (see "Dosage") no adverse effect will result to reinforcing steel, either of the mild or high tensile types.

The use of accelerating admixtures is not generally recommended for prestressed concrete on account of misgivings as to their possible corrosive effect on the wires or tendons.

Dosage:

For maximum safety in cold weather and to protect the concrete against damage from frost during the critical initial hardening process, Febflow Accelerating should be used at the rate of 850ml per 50kg cement in the mix with the air temperatures down to -4°C and rising. When the temperature is falling, and for temperatures between -4°C and -7°C, 1700ml per 50 kilo of Febflow Accelerating cement should be used.

N.B At the lower of the two recommended dosages the quantity of anhydrous calcium chloride is only 0.75% by weight of cement. It follows therefore that even at the higher recommended dosage only 1.5% anhydrous calcium chloride is present, which is within the limits set by virtually every recognised Authority and Research Organisation.

Watch Points:

- In no circumstances should the dosage exceed 1700ml per 50 kg cement.
- When using Febflow Accelerating during frosty weather, care should be taken to ensure that the aggregates are free from frost. Also the cement content of the mix should not be reduced and the work should be protected by covering the concrete as soon as possible after it has been placed.
- The Febflow Accelerating must be thoroughly dispersed through the mix and accurately dispensed. The measured quantity of admixture should form part of the gauging water of the mix.

Packaging:

Febflow Accelerating is available in 5, 20 and 200 litre containers

Storage:

Will freeze but can be reconstituted by stirring after thawing.

AGITATE WELL BEFORE USE.