

DARASET[®] AF

Non-chloride, non-corrosive set accelerator

Product Description

DARASET[®] AF is a chloride-free, non-corrosive accelerating admixture for concrete which accelerates cement hydration resulting in shortened setting times. DARASET[®] AF is a brown aqueous solution of organic and inorganic compounds, and does not contain any chloride components such as calcium chloride. DARASET[®] AF is manufactured under controlled conditions to produce a consistent product which ensures uniform predictable performance when used. DARASET[®] AF has been formulated to comply to the requirements of: Australian Admixture Standard 1478 Type AC Classification Appendix C4 (c)(i).

Applications

DARASET[®] AF may be used to speed finishing operations and/or form removal, leading to savings in concrete construction costs. DARASET[®] AF can be used in any Portland cement mixes and produces similar results when mixed in mortar.

- Cold weather concreting when accelerated set times are required.
- Prestressed/Precast concrete to reduce cycle times or heat curing times.
- In any concrete where earlier use of the concrete is required.

Advantages

- DARASET[®] AF non-chloride, non-corrosive set accelerator provides accelerated finishing times, especially in low temperatures. DARASET[®] AF can therefore be used where the potential corrosion of embedded or stressed steel must be avoided.
- DARASET[®] AF is used wherever it is desirable to reduce the setting time of concrete. Typical results show that when concrete containing DARASET[®] AF is poured at 10°C, the concrete will set up to 2 hours quicker than reference concrete.
- Concrete containing DARASET[®] AF can be placed on steel clad and zinc coated steel decks without the potential of corrosion.
- When DARASET[®] AF is used in a mix that is designed with pozzolans, such as fly ash and slag, acceptable finishing times are achieved during low temperatures, thus optimising mix costs.
- With quicker set times over reference concrete, DARASET[®] AF can be used to speed up finishing operations and/or form removal, leading to savings in concrete construction costs.
- In the manufacture of prestressed/precast concrete, earlier removal of forms leads to reduced cycle times, faster mould turnaround and reduced cost. The accelerated set times of concrete containing DARASET[®] AF may allow a reduction in curing temperatures or shortened heat curing times in precast operations.

Packaging & Storage

DARASET® AF is delivered in bulk and in 205L drums. Protect from freezing. Once frozen, the product should be thawed out slowly and remixed thoroughly prior to use.

Product Advantages

- Chloride-free
- Reduced finishing/setting times
- Steel clad and zinc coated steel decks
- Mix economics
- Reduced construction costs
- Precast/prestressed concrete

Addition Rates

DARASET® AF may be used from 250 to 1,500mL / 100kg total cementitious material. The exact dosage depends on the specific job conditions, on local materials, on the degree of set acceleration required and on the type of water reducer used. Typical dose rate is 500 to 1,000mL / 100kg of cementitious material. Trial mixes should be conducted in order to determine specific dose rates required for the desired performance.

Triethanolamine is present at less than 0.025% for a dose rate of 100mL / 100kg total cementitious material in a concrete mix.

Compatibility with Other Admixtures

DARASET® AF is compatible in concrete with all air entrainers such as DAREX AEA®, water reducers such as WRDA® and high range water reducers such as DARACEM® from GCP Applied Technologies.

DARASET® AF is compatible with all known admixture types currently available, but should be added to the mix separately and not premixed prior to addition.

Dispensing Equipment

A complete line of admixture dispensers is available. The dispensers are accurate and easy to maintain, and easily adapted to new or existing batching plants.

Health and Safety

See DARASET® AF Material Safety Data Sheet or consult GCP Applied Technologies.

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Last Updated: 2023-07-06

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