

DARASET[®] 333

Non-corrosive, non-chloride set accelerating admixture

Product Description

DARASET[®] 333 is a non-corrosive, non-chloride admixture for concrete. It accelerates cement hydration, resulting in shortening setting times and increased early compressive strengths.

DARASET[®] 333 does not contain calcium chloride and is completely non-corrosive to reinforcing steel, metal decks, and to all metal components of admixture storage and dispensing systems. It conforms to AS1478 Type AC.

Typical Properties

- Appearance: Pale straw coloured liquid
- Air Entrainment: Nil
- Added Chloride Content: Nil
- Freezing Point: -20°C

Product Advantages

- Specially formulated to reduce concrete setting times and increase early strength of concrete in very cold conditions.
- May be used to speed finishing operations and/ or form removal, leading to savings in concrete construction costs.
- Provides set acceleration and early strength development similar to that provided by calcium chloride, but without the potential corrosive effects.
- Can be used where potential corrosion of embedded or stressed steel must be avoided.
- Can be used in concrete that is to be placed on steel clad or zinc coated steel decks where corrosion must be avoided.

Addition Rates

Typical addition levels range from 500 to 1,500mL / 100kg total cementitious, but levels as high as 5,000mL / 100kg of total cementitious can be used. The amount of DARASET[®] 333 used will depend on specific job conditions, on local materials and on the degree of set acceleration and early strength development required.

DARASET[®] 333 is supplied ready for use. Since DARASET[®] 333 may be used at high dosages, the concrete producer should account for the water contained in DARASET[®] 333.

One litre of DARASET[®] 333 weighs approximately 1.30kg and added to a concrete mixture will contribute 0.83kg of water to that mixture.

Overdosing of DARASET[®] 333 will produce an increased rate of setting and a reduction of the ultimate concrete strength.

Packaging

DARASET® 333 is supplied in drum, IBC and bulk.

Storage

DARASET® 333 should be stored above 0°C and protected from frost. If the product does freeze, it should be carefully thawed before mixing.

Health and Safety

See DARASET® 333 Material Safety Data Sheet or consult GCP Applied Technologies.



Compatibility with Cements

In concrete mixtures, DARASET® 333 accelerates the chemical reaction between Portland Cement and water. It speeds up the formation of gel – the binder that bonds concrete aggregates together. Accelerated gel formation, shortens the setting time of concrete, compensates for the set-slowing effects of cold weather and contributes to the development of higher strength. Gel formation promotes heat generation within the mixture – helping to protect the concrete from freezing during the critical first hours after placement.

In common with most concrete accelerators, the inclusion of DARASET® 333 may reduce the ultimate compressive strength of concrete. The extent of strength loss should be established by conducting concrete trial mixes.

Compatibility with Other Admixtures

DARASET® 333 is compatible with air-entraining admixtures such as DAREX AEA®, water reducers such as WRDA® PWN and WRDA®PN, mid-range water reducers such as MIRA®VN5 and MIRA VS, and high range water reducers such as ADVA®Cast 620.

Precaution should be taken to avoid mixing DARASET® 333 with other admixtures before they enter the concrete. However, once they have been separately added to the mixture, the products will function as prescribed.

Dispensing Equipment

Please contact your local GCP representative for further information regarding the dispensing equipment for this product.

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