

DARASET[®] 580

Non-Corrosive, Non-Chloride Set Accelerating Admixture

Description

DARASET[®] 580 is a non-corrosive, non-chloride admixture for concrete. It accelerates cement hydration, resulting in shortened setting times and increased early compressive strengths.

DARASET[®] 580 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 BS EN 934-2 and to Type C of ASTM C 494.

Typical Properties

Appearance: Light Brown Liquid

Air Entrainment: NIL

Chloride Content: NIL as per BS EN 480-10

Freezing Point: -23°C

Compatibility with Cements

In concrete mixtures, DARASET[®] 580 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-slowness 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 hour after placement.

Advantages

- Specially formulated to reduce concrete setting times and increase early strength of concrete in very cold conditions.
- May be used to reduce the time for which the concrete must be protected against freezing in ambient temperatures as low as -7°C.
- 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.

In common with most concrete accelerators, the inclusion of DARASET[®] 580 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[®] 580 is compatible with air-entraining admixtures such as the DAREX[®] AE Series; water reducers such as WRDA[®] P4 and WRDA[®] P7; mid-range water reducers such as WRDA[®] 90, and high-range water reducers such as DARACEM[®] 205. DARASET[®] 580 should not be premixed under any circumstances with other admixtures. While some admixtures can be usefully combined within the same mix the performance of this product may well be affected by the presence of other chemicals and we recommend that Grace be contacted for advice in all such circumstances.

Addition Rates

Range: 500 ml – 4000 ml per 100 kg cement (0.5%-4.0% volume by weight of cement)

The amount of DARASET[®] 580 used will depend on specific job conditions, on local materials and on the degree of set acceleration and early strength development required. **Typical addition levels range from 500 ml to 2000 ml/100 kg cement**, but levels as high as 4000 ml/100 kg cement can be used.

DARASET[®] 580 is supplied ready for use. Since DARASET[®] 580 may be used at high dosages, the concrete producer should account for the water contained in the DARASET[®] 580.

One litre of DARASET[®] 580 weighs approximately 1.40 kg and added to a concrete mixture will contribute 0.77 kg of water to that mixture.

Overdosing of DARASET[®] 580 will produce an increased rate of setting and a reduction of the ultimate concrete strength.

Dispensing

A range of equipment, advice on supply and fitting are available from Grace Construction Products on request. DARASET[®] 580 may be introduced on the sand, in the water, or at the end of the batch of cycles. Similar to all concrete admixtures, DARASET[®] 580 should not come in contact with other admixtures prior to entering the concrete.

Health and Safety

For further information see the DARASET® 580 Safety Data Sheet or consult Grace Construction Products.

Packaging

DARASET® 580 is supplied in 210 litre, non- returnable containers.

Alternatively, 1000 litre IBCs or bulk deliveries can be arranged.

Storage

DARASET® 580 should be stored in original containers or suitable closed tanks, preferably out of direct sunlight and protected from extremes of temperature.

Storage Life in Manufacturer's Drums:

12 months from date of manufacture.

Storage Life in Bulk Storage:

12 months from date of delivery.

www.graceconstruction.com

Grace Concrete Chemicals Grace Construction Products
LLC Georgian Concrete Club
G.Saakadze descent str 11 Post Code 0160 Tbilisi/Georgia
Mob. +995 577.522.999
Tel. +995 322.954.831
E-mail. info@gracegeorgia.com
Web. www.grace.com
www.geoconcrete.ge

GRACE