

# DARAPEL<sup>®</sup>

Integral Water Repellent Admixture for Concrete

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## Product Description

DARAPEL<sup>®</sup>admixture is a stable dispersion of stearate and other water repellent compounds that is added to ready mixed concrete during mixing. DARAPEL is a ready to use, factory prepared liquid that will simplify handling and eliminate guesswork.

The addition of DARAPEL to the mix will provide hydrophobic, water-repelling, properties. The water insoluble components act as non-wettable lining on the walls of all pores and voids in the mix, making them water repellent. The DARAPEL “built-in” water barriers guard against damage caused by water infiltration.

Architects, engineers, contractors and other authorities agree that even good quality concretes, mortars, etc. that are properly placed, set or applied then cured, are inherently porous or permeable to water. The free passage of moisture occurs in pores formed during and after placing. DARAPEL forms an internal barrier against water transmission in mixes used for ready mixed or precast concrete.

DARAPEL can also be added to semi-dry concretes used in the production of masonry products. DARAPEL provides superior resistance to the penetration of moisture in concrete masonry units and reduces the incidence of efflorescence. DARAPEL has particular benefit when used in the production of blocks, bricks or paviour manufacture. It can also be utilised in various mortar mixes and semi-dry masonry units.

## Product Advantages

The addition of DARAPEL will reduce the amount of water that permeates the concrete. Reducing the passage of water will provide beneficial advantages by:

- Increasing resistance to weathering – wetting and drying – freezing and thawing
- Increasing resistance to chemical attack
- Reducing the potential for efflorescence
- Reducing the probability of corrosion of embedded metal
- Improving colour fastness and colour density.

## Typical Properties

Appearance	white opaque liquid
Specific Gravity	1.02 at 20°C 1.02 at 20°C
Chloride Content	Nil
Freezing Point	0°C

## Method of Use

DARAPEL is supplied ready for use, it should be added to concrete mixes, during the mixing process, preferably the same time as the mixing water. It should not be added directly to the cement. When used in wet concretes, it is necessary to reduce the free water content to obtain constant workability and to maximise the permeability reduction potential. If the free water content is not reduced, workability of the concrete may increase and a reduction in compressive strength will result. No extension of normal mixing time is necessary.

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## Compatibility with Cements

DARAPEL can be used with all types of Portland, Pozzolanic, Blast Furnace cements. It can also be used with fly ash and silica fume.

## Compatibility with other Admixtures

DARAPEL 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 GCP Applied Technologies be contacted for advice in all such circumstances.

## Addition Rates

Range: 200 ml–1000 ml per 100kg of cement

Addition rates outside of the recommended dosage range may be used for special concrete applications. In such circumstances it is important to conduct preliminary trials on the actual mix constituents to assess the effect of the properties of the concrete at the dosage level specified.

DARAPEL<sup>®</sup> can be added to mixes containing other GCP Admixtures. Testing with actual materials should be done to determine performance. Each admixture must be added separately to the mix. Do not allow any of the admixtures to contact each other before they enter mix.

## Effects of Overdosing

Overdosing of DARAPEL will generally produce a significant increase in workability which could possibly be accompanied by a reduction in compressive strength. Additional delays in concrete setting time could result, especially when sulphate resisting cement is utilized.

## Dispensing

It is preferable that liquid admixtures for concrete should be introduced into a mixer by means of automatic dispensing equipment, details of which are available upon request.

## Health and Safety

For further information see DARAPEL SDS (Safety Data Sheet) or consult GCP.

## Packaging

DARAPEL is supplied in 210 litre free, non-returnable containers. Alternatively, bulk deliveries can be arranged.

## Storage

DARAPEL should be stored above 3 °C. Below this temperature the product will cloud and at lower temperatures gel. DARAPEL, in common with most emulsions, is seriously affected by freezing. This is irreversible damage and cannot be reconstituted on thawing.

DARAPEL 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 the date of manufacture

### Storage Life in Bulk Storage:

12 months from the date of delivery

## Technical Service

The Technical Service Department of GCP is available to assist you in the correct and best use of our products. These resources and advice are at your disposal entirely without obligation. Please contact:

### GCP

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