

# DARAPEL<sup>®</sup> Data Sheet

Integral water repellent admixture

## Product Description

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

## Uses

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<sup>®</sup> forms an internal barrier against water transmission in mixes used for ready mixed or precast concrete.

## Performance

The addition of DARAPEL<sup>®</sup> to the mix will provide hydrophobic (water-repelling) properties. The water insoluble stearate acts as a non-wettable lining on the walls of all pores and voids in the mix, making them water repellent. The DARAPEL<sup>®</sup> “built-in” water barriers guard against damage caused by water infiltration.

## Improved Product Quality

Higher quality concrete will result from the use of DARAPEL<sup>®</sup>. The workability of mixes will be improved especially in low cement content concrete mixes. The protection of embedded steel and resistance to bacteria or fungus growth may also be increased by keeping the concrete drier.

## Product Advantages

The addition of DARAPEL<sup>®</sup> will reduce the amount of water that permeates through the concrete. Reducing the passage of water will provide beneficial advantages by:

- Increasing resistance to weathering
  - wetting and drying
  - freezing and thawing
- Increase resistance to chemical attack
- Reduce the potential for efflorescence
- Reduce the probability of corrosion of embedded meta

## Air Content

Added by itself, DARAPEL<sup>®</sup> may have a slight effect on the entrained air volume. Trial mixes or field tests are recommended to evaluate its effect with your material at your plant. Over-dosing can cause variations in air content.

## Curing

Proper curing of the in-place mix is vital. Allowing the mix to prematurely dry out should be prevented because re-wetting (and continued hydration) may not be effective.

## Dispensing Equipment

It is recommended that DARAPEL<sup>®</sup> be dispensed into the concrete and thoroughly mixed to provide complete dispersion. DARAPEL<sup>®</sup> can be added at any point during the charging of the mixer.

A complete line of automated, high precision dispensing equipment is available for plant installation through your GCP admixtures representative.

## Packaging and Handling

DARAPEL<sup>®</sup> is available in totes, drums and pails.

DARAPEL<sup>®</sup> must be protected from freezing at temperatures of 32°F (0°C) and below, as the admixture is not usable once frozen.

## Flammability

None.

## Addition Rates

The amount of DARAPEL<sup>®</sup> necessary for a specific mix depends upon the degree of water repellency desired. Suggested addition rates for DARAPEL<sup>®</sup> in ready mixed or precast concrete are 3.0 to 6.0 fl oz/100 lb (190 to 390 mL/100 kg) of cement.

## Compatibility with Other Admixtures and Batch Sequencing

DARAPEL<sup>®</sup> can be added to mixes containing other 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 the mix.

## The GCP Advantage in Admixtures

DARAPEL<sup>®</sup> was developed by GCP Applied Technologies – recognized world-wide as a leader in concrete admixture technology. Pioneers in this specialized field for over 50 years, we operate one of the largest privately owned cement and concrete research laboratories.

Our admixtures are manufactured in modern U.S. and Canadian plants, under strict quality controls which assure their quality, uniformity and performance. Highly trained GCP admixture specialists are ready to assist you in their use.

Today, when so much depends on every element of a construction project, you can rely on the special combination of experience, product quality and technical support which are the “GCP Advantage” in admixtures.

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