

## **Darapel®** Integral Water Repellent Admixture for Concrete

### **Description**

Darapel® admixture is a stable dispersion of stearate and other water repellent compounds that is added into ready mixed concrete during mixing.

One litre weighs approximately 1.02 kg ± 0.02 kg.

### **Where it is Used**

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.

### **How it Works**

The addition of Darapel 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 “built-in” water barriers guard against damage caused by water infiltration.

### **Benefits and Advantages**

The addition of Darapel 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 metal



### **Improved Product Quality**

High quality concrete will result from the use of Darapel. 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.

### **Addition Rates**

The amount of Darapel necessary for a specific mix depends upon the degree of water repellency desired. Suggested addition rates for Darapel in ready mixed or precast concrete are 190 to 390 ml / 100kg of cementitious material.

### **Compatibility with Other Admixtures**

Darapel can be added to mixes containing other Grace 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.

### **Air Content**

Added by itself, Darapel 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. Overdosing can cause variations in air content.

### Strength

Added by itself, Darapel may have a slight effect on strength. Trial mixes are recommended to evaluate its effect with local materials.

### 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

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

### Packaging

Darapel is available in 208L drums and 20L pails.

### Freezing Point

Darapel will freeze at approximately 0°C and cannot be remixed after freezing.

### Flammability

None.

### Health and Safety

See Darapel Material Safety Data Sheet or consult Grace Construction Products.

[www.graceconstruction.com](http://www.graceconstruction.com)

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