

# DARAVAIR<sup>®</sup>

Air-entraining admixture for enhanced resistance to freeze thaw action

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## Product Description

DARAVAIR<sup>®</sup> is an aqueous solution of completely neutralised vinsol resin and is produced at a high concentration and low viscosity. Daravair is a clear, dark brown liquid intended for use as supplied. Daravair has been specifically formulated to be used in both masonry mortar and concrete. One litre of Daravair weighs approximately 1.04kg ± 0.02kg.

## Features and Benefits

- Through the purposeful entrainment of air, Daravair markedly increases the durability of concrete to all exposures particularly to freezing and thawing.
- It has also demonstrated a remarkable ability to impart resistance to the action of frost and deicing salts as well as sulfate, sea and alkaline waters.

## Applications

Daravair may be used wherever the purposeful entrainment of air is required by concrete specifications. It is particularly useful in mass concrete and in high cement factor, low slump paving mixes, which require efficient, effective air-entraining admixtures. Daravair entrains air readily even under adverse conditions such as described above or when fly ash or manufactured sand is used in the concrete mix.

## Air Entraining Action

Air is incorporated into the concrete by the mechanics of mixing but stabilised into millions of discrete semi-microscopic bubbles in the presence of a specifically designed air-entraining admixture such as Daravair.

These air bubbles act much like flexible ball bearings increasing the mobility, or plasticity and workability of the concrete. This permits a reduction in mixing water with no loss of slump. Placeability is improved. Bleeding, green shrinkage and segregation are minimised.

## Compatibility with Other Admixtures

Daravair is compatible in concrete with all known accelerating admixtures, water-reducing admixtures and water-reducing retarders. By combining the separate effects of air entrainment with the dispersion of a water-reducing admixture, the water requirement of concrete may be reduced with proportional increases in strength and improvement in durability. Each admixture should be added separately to the mix.

## Packaging

Daravair is available in bulk, and 205L drums. Daravair contains no flammable ingredients. It freezes at about  $-1^{\circ}\text{C}$ , but its airentaining properties are completely restored after thawing and mechanical agitation.

## Health and Safety

See Daravair Material Safety Data Sheet or consult GCP Applied Technologies.



## Addition Rates

There is no standard addition rate for Daravair. The amount to be used will depend upon the amount of air required under job conditions, usually in the range of 4 to 8%. Typical factors which might influence the amount of air entrained are: temperature, cement, sand gradation, and use of extra fine materials such as fly ash. Typical Daravair addition rates range from 150 to 300mL / 100kg of cementitious materials.

The air-entraining efficiency of Daravair becomes even greater when used with water-reducing and set-retarding agents. This may allow a reduction of up to two-thirds in the amount of Daravair required for the specified air content.

## Mix Adjustment

Entrained air will increase the volume of the concrete making it necessary to adjust the mix proportions to maintain the cement factor and yield. This may be accomplished by a reduction in water requirement and aggregate content.

## Dispensing Equipment

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

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