



# DA-3510

## Dairen Chemical Corporation

## VAE Redispersible Powder

### TYPICAL PROPERTIES

Polymer Type.....	Vinyl Acetate-Ethylene copolymer
Appearance.....	White Powder
Protective Colloid.....	Polyvinyl Alcohol
Solids Content*.....	98min
Ash Content*.....	10 ± 2%
Bulk Density (g/ml).....	0.4~0.5
Average Particle Size ( μ m).....	85

### 50 % Redispersion

pH.....	9~11
Tg *(onset, °C).....	-10±3

*\*marked items, are ex-works delivery specification. All other figures are typical physical properties for reference only.*

### Introduction

DA-3510 is a water-redispersible vinyl acetate/ethylene copolymer powder that is readily dispersible in water and forms stable emulsion. This resin is soft and flexible, because of its relatively high ethylene content. Its glass transition temperature is below freezing point.

This redispersible powder is especially recommended for blending with inorganic binders such as cement, gypsum and hydrated lime, or as a sole binder for making construction adhesives and seals.

### Applications

DA-3510 enhances the adhesion, flexural strength, plasticity, workability of modified compounds without appreciably affecting flow, thixotropy or water retention. It is therefore compatible with mortar additives used to achieve special processing characteristics.

The water repellency of construction materials enhanced with DA-3510 depends on the formulation. Additives such as antifoam agents, thickeners, anti-flow additives, flow improvers, superplasticizer agents, retarders, water retention agents or general surfactants can significantly affect the water repellency. The water-repellent properties are much more pronounced with silicate fillers than with carbonates.

Because of its low glass-transition temperature, DA-3510, if added in sufficient amounts, imparts excellent plasticity to building materials, even

at low temperatures.

If added in very high amounts, DA-3510 prevents the penetration of water. However, higher plasticity of compositions enhanced with DA-3510 is only observed when the redispersible powder is added in amounts over 5 %, based on total weight.

### Recommended Uses

#### Sealing slurries

DA-3510 is recommended for obtaining trowelling compounds that show high plasticity and good adhesion to smooth and organic substrates.

It is an excellent waterproofing effect in mortar when added in quantities of 3~6 %, and it is recommended as an additive for sealing slurries.

#### Plasters

DA-3510 added to cement and lime-cement finishing plasters improves their adhesion and flexibility. In addition, 0.2 – 0.5 % cellulose ether or starch ether or a combination of the two should be incorporated. Since DA-3510 acts as water repellent with binder properties, it is suitable for the manufacture of renovating plaster, especially those containing lightweight aggregate.

We recommend adding 1 – 8 % redispersible powder.

#### Thermal insulation systems

To obtain adhesives with greater plasticity, it is advisable to use no less than 3 % DA-3510 and 0.1 – 0.3 % of a suitable water retention agent such as methyl cellulose.

Expanded polystyrene sheets recommended for this purpose are suitable for use with these adhesives. However, if sheets have been cut by hot wire, ensure that the surface is not too badly sintered. It is important to carry out preliminary tests on sheets of extruded polystyrene foam.

### Processing

For the production of powdered products such as dry mortars, tile adhesives, troweling compound. DA-3510 redispersible powder is mixed with the dry, finely divided additives in suitable mixers. Pressure or excessive shear in the mixer and the transferring line should be avoided, since this will raise the temperature, leading to agglomeration of the thermoplastic resin particles. After sufficient water has been added, mortars or trowelling compounds can be mixed by hand or machine.

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Since mixing by hand only generates low shear forces, it is best to allow the mixture to mature by leaving it to stand for 5 minutes, and then to stir it again.

### **Storage**

DA-3510 redispersible powder should be stored in cool and dry environment. It is recommended to use within 6 months, preferably be used as soon as possible in summer. Storage in high temperature and humidity conditions will increase the risk of caking. Opened containers should be used as soon as possible, if not, should be resealed to prevent ingress of moisture from the air.

DA-3510 redispersible powder supplied in paper bags should not be stacked. Prolonged heavy pressure may cause caking. Storage under pressure should also be avoided.

### **Packaging**

25 kg paper bags  
Big Bags (sizes on request)

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