



## Technical Data Sheet

# FINNDISP™ A 2002 Acrylic Co-Polymer Dispersion

## Acrylic Co-polymer Dispersion

### Regional Product Availability

EMEA

### Description

FINNDISP™ A 2002 is an acrylic co-polymer dispersion stabilized with an anionic emulsifying system for high gloss applications.

The polymerization technology of FINNDISP A 2002 gives a polymer having high gloss values. The glass transition temperature, T<sub>g</sub>, of FINNDISP A 2002 is relatively high, 55°C. If a lower T<sub>g</sub> is needed FINNDISP A 2002 can be blended with the corresponding low T<sub>g</sub> product FINNDISP A 2001. FINNDISP A 2001 has excellent water and blistering resistance and the adhesion to gloss aged alkyd is excellent already after 24 h drying.

FINNDISP A 2002 is easily formulated, not sensible to manufacturing or application variables and is produced with low foaming tendency.

### Characteristics

- For DIY and industrial high gloss applications
- Excellent for both wood and metal applications
- Good for clear lacquers
- Remarkable adhesion to aged gloss alkyd
- By blending with FINNDISP™ A 2001 Acrylic Co-Polymer Dispersion enhanced hardness and flexibility can be achieved

### Typical Properties

These properties are typical but do not constitute specifications.

Property	Typical Values
Appearance	White to bluish
Solids content %	47–49%
pH	8.5 – 9.0
Brookfield viscosity (spindle 2, 20 rpm)	300 –1000 mPa.s
Minimum Film Formation Temperature	54 – 56 °C
Specific gravity (wet)	1,07 g/cm <sup>3</sup>
Specific gravity (dry)	1,10 g/cm <sup>3</sup>

### Formulation Guidelines

The technology used for producing FINNDISP™ A 2002 Acrylic Co-Polymer Dispersion results in a polymer having high gloss values. By blending with the corresponding low T<sub>g</sub> product FINNDISP A 2001 optimum hardness and flexibility can be achieved.

**Below are some guidelines to help formulators:**

### **Dispersants**

In order to achieve optimal gloss, different dispersants have been evaluated. In standard formulations with a high gloss titanium dioxide an optimal gloss is achieved using OROTAN™ 165 or OROTA 731 A ER Dispersant.

### **Defoamers**

A proper selection of defoamer is important as in all high gloss paints. In pigmented formulations excellent results have been seen with Byk-023, Byk-025, Foamaster ENA 415, Tego Foamex 825, Drewplus S-4386 etc. In high gloss VOC free paints the defoamer selection is even more important. Byk-025, Byk-026 and Foamaster ENA 415 are not affecting the film formation and are therefore strongly suggested.

### **Rheology Modifiers & Thickeners**

FINNDISP™ A 2002 Acrylic Co-Polymer Dispersion has excellent thickener efficiency with associative thickeners. The amount of needed thickener is therefore low while the paint still shows good levelling and flow. In high gloss paints the optimal thickener is ACRY SOL™ RM-2020E. Coalescents and co-solvents the selection of the co-solvent is critical to achieve the right balance between hardness and flexibility. But by blending FINNDISP A 2002 and FINNDISP A 2001 the co-solvent demand is considerably reduced.

### **Adjustment of pH**

The pH of the formulation can easily be adjusted by ammonia for example. The storage stability of the formulation should always be checked.

### **Extenders**

The particle morphology and the small particle size of FINNDISP™ A 2002 Acrylic Co-Polymer Dispersion offer excellent pigment binding characteristics. It is even possible to formulate high PVC (80 %) paints with good scrub resistance.

### **Titanium Dioxide**

For achieving optimal gloss it is important to choose a titanium dioxide grade for high gloss applications, for example Kemira RDI-S, Kronos 2190 or Tiona RCL 535.

### **Cross-linking**

FINNDISP™ A 2002 has carboxylic functionality, which is readily available for cross-linking with resins having affinity for carboxylic groups. This includes carbodi-imide (2-package) and aminoplast (1-package) type cross-linkers. Epoxy resin modification (2-package) is showing outstanding ambient and forced-drying cross-linked performance properties for both clear and pigmented coating systems. The epoxy resins can be added directly to the FINNDISP A 2002 or to the paint with good mixing for 5 to 15 minutes.

## Handling Precautions

Before using this product, consult the Material Safety Data Sheet (MSDS)/Safety Data Sheet (SDS) for details on product hazards, recommended handling precautions and product storage.

**CAUTION!** Keep combustible and/or flammable products and their vapors away from heat, sparks, flames and other sources of ignition including static discharge. Processing or operating at temperatures near or above product flashpoint may pose a fire hazard. Use appropriate grounding and bonding techniques to manage static discharge hazards.

**CAUTION!** Failure to maintain proper volume level when using immersion heaters can expose tank and solution to excessive heat resulting in a possible combustion hazard, particularly when plastic tanks are used

## Storage

Store products in tightly closed original containers at temperatures recommended on the product label.

## Disposal

Dispose in accordance with all local, state (provincial) and federal regulations. Empty containers may contain hazardous residues. This material and its container must be disposed in a safe and legal manner.

It is the user's responsibility to verify that treatment and disposal procedures comply with local, state (provincial) and federal regulations. Contact your Dow Coating Materials Technical Representative for more information.

## Chemical Registration

Many countries require the registration of chemicals, either imported or produced locally, prior to their commercial use. Violation of these regulations may lead to substantial penalties imposed upon the user, the importer or manufacturer, and/or cessation of supply. It is in your interests to ensure that all chemicals used by you are registered. The Dow Chemical Company does not supply unregistered products unless permitted under limited sampling procedures as a precursor to registration.

Note on EMEA  
Product Line

Product availability and grades vary throughout the countries in the EMEA area. Please contact your local Dow Coating Materials representative for further information and samples.

Product  
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