



Excellent dispersant for  
waterborne paints and coatings  
with remarkable water mark  
resistant performance



Alcosperse® 787

Nouryon

# Alcosperse<sup>®</sup> 787 dispersing agent

Alcosperse 787 is a novel hydrophobically modified acrylic copolymer dispersing agent developed to help formulators create innovative waterborne paints and coatings with excellent performance characteristics over competitive dispersants such as water mark resistance, alkaline and salt resistance, and other related hydrotropic effects.

Alcosperse 787 demonstrates good dispersing efficiency of pigments and fillers in paint. Compared with competitive dispersants, Alcosperse 787 dispersing agent also provides effective color acceptance with both inorganic and organic colorants.

## Major applications

- Water-based architectural paint (interior and exterior)
- Water-based industrial paint formulation, acrylic based wood coating, metal coating and floor care, etc.

## Benefits

- Excellent watermark resistant performance
- Excellent pigment dispersion
- Better color acceptance than other dispersants in the marketplace
- Good hydrophobic properties
- Good storage stability
- Excellent choice for acrylic emulsion-based paint formulations

## Technical properties

### Alcosperse 787 dispersing agent

% solids	30-32
pH @ 25°C	7-8
Solubility	Soluble in water
Appearance	25°C clear; light yellow to amber liquid
Suggested usage	1% to 2% based on pigment

## Performance evaluations

### 1. Excellent water mark resistance and color acceptance

Tests conducted by Nouryon's scientists show that formulations containing Alcosperse 787 dispersing agent exhibit excellent watermark resistant performance when compared with other competitive dispersants (Figure 1).

Test method: Two layers of film with 120µm then 80µm were drawn down with applicator on 150mm x 70mm x 4~6mm cement plate. After six hours, when base coat dried, a top coat was applied. The cement plate was left at room temperature for 24 hours and then a 1ml water was dropped on the film. When the water dried completely, the water mark on the film was observed.

Color acceptance test results are demonstrated in Figure 2.

### Formula used in the test: Exterior paint formulation (69 PVC) mid-level outdoor formula

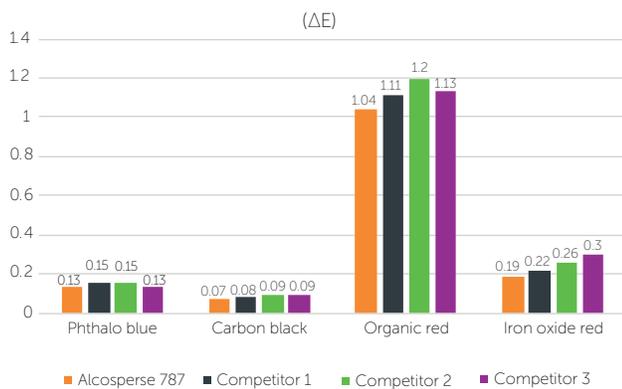
Grind	Weight (g)
Propylene Glycol	15
MEHEC	6
Neutralizer	1
Dispersant	7
Wetting agent	2
Defoamer	1
TiO <sub>2</sub>	150
CaCO <sub>3</sub>	150
Clay	90
<b>Sub-total</b>	<b>682</b>
Latex, (47.5%)	250
Coalescent	18
Defoamer	2
Water	46
Biocide	2
<b>Total</b>	<b>1000</b>

Figure 1: Water mark resistance test results





**Figure 2: Color acceptance test results (2% colorant and rub off)**

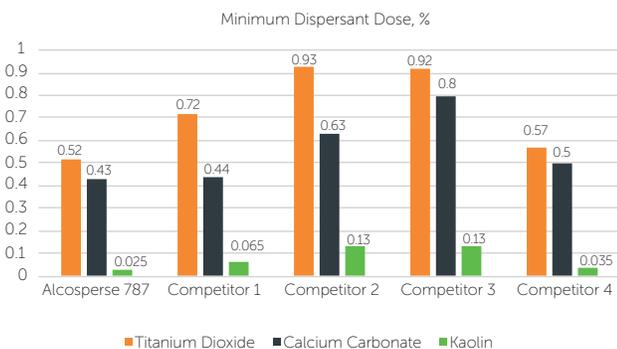


## 2. Dispersing efficiency

Test method: Demand curve was used to evaluate the dispersing efficiency of dispersants. Procedure: 1) Water and pigment or fillers were mixed to slurry; 2) Dispersants were added in 0.1-0.2g intervals to the slurry while stirring. Amount of dispersant and test the Brookfield viscosity of the slurry were recorded. When reaching the lowest Brookfield viscosity, three more dispersants were added. The dispersant dosage at the lowest Brookfield viscosity is the minimum dosage.

Test results (Figure 3) demonstrate superior performance of Alcosperse 787 dispersing agent when compared to competitive dispersants.

**Figure 3: Minimum dispersant demand data**



## 3. Gloss and opacity performance

Test results (Figure 4 and 5) demonstrate that formulations containing Alcosperse 787 dispersing agent have better or similar performance when compared with competitive polymers.

**Figure 4: Gloss test results**

Dispersant agent	Temperature (ambient)		
	20°	60°	85°
Alcosperse 787	1.3	2.9	5.3
Competitor 1	1.3	2.9	4.8
Competitor 2	1.3	2.7	4.9
Competitor 3	1.3	2.8	5.1
Competitor 4	1.3	2.7	4.2

**Note:** Prepared film on a black and white paper card board by a 100µm bar applicator and tested by the gloss meter.

**Figure 5: Opacity test**

Dispersant agent	Opacity
Alcosperse 787	94.30
Competitor 1	94.28
Competitor 2	94.29
Competitor 3	93.31
Competitor 4	93.50

**Note:** Prepared film on a black and white paper card board by a 100µm bar applicator and tested by the colorimeter.

## Usage and packaging

Please consult Nouryon technical support representative in your region to define ideal dosage suggested for your systems.

## Storage and handling

For complete information on how to handle and store Alcosperse 787 dispersing agent, please contact a product Safety Data Sheet by contacting Nouryon Customer Service in your region.



Contact us directly for detailed product information  
and sample requests at [pci@nouryon.com](mailto:pci@nouryon.com)

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