

## TECHNICAL DATA SHEET

# SYNAQUA® 2080

*Alkyd Emulsion*

### PRODUCT APPLICATION DETAILS

SYNAQUA® 2080 is a short oil alkyd emulsion designed for use in high performance decorative paints.

SYNAQUA® 2080 is suitable for the formulation of low to zero-VOC wall paints and might be used in the formulation of trim paints.

SYNAQUA® 2080 is formulated without alkylphenolethoxylates, and is ammonia-, solvent- and plasticizer- free.

### SALES SPECIFICATIONS

	CHARACTERISTICS	METHODS
Solid content (125°C)	49 - 51 %	ISO 3251
pH	6.0 - 8.0	ISO 976
Viscosity (Brookfield DVE, spindle1, 10rpm) (23°C)	300 max mPa.s	ISO 2555

### OTHER CHARACTERISTICS<sup>1</sup>

	CHARACTERISTICS	METHODS
Appearance	White milky liquid	
Solvent	Water	
Density (23°C)	1.07 g/ml	ISO 2811
Fatty acid type	Linoleic rich	
Fatty acid content	40 %	
Average particle size	300 max nm	ISO 13321

<sup>1</sup>The data provided for these properties are typical values, intended only as guides, and should not be construed as sales specifications

### MARKETS

#### Coatings & Inks

- Architectural Coating
  - Interior Wall
  - Trim

### PERFORMANCE BENEFITS

- Extremely low VOC content (no requirement for coalescing solvents)
- High gloss potential
- Low yellowing
- Quick drying time
- Good hardness development
- Good application characteristics

# SYNAQUA® 2080

## FORMULATION GUIDELINES

### DRIERS

It is recommended to use driers that have been especially developed for water based coatings.

A suitable drier for SYNAQUA® 2080 can be the use of a plurimetalllic drier, for exp. Additol® VXW 6206 <sup>(1)</sup> at 1.5% on resin solids or the use of 0.1-0.15% of cobalt alone on resin solids. Co-free driers such as BORCHI® OXY - Coat 1101 <sup>(2)</sup> at 0.5% on resin solids can also be used.

Unlike solvent-based alkyls no antiskinning agent is required when formulating with SYNAQUA® 2080.

### RHEOLOGY

Rheology and viscosity can be controlled by using associative thickeners such as HEUR thickeners, e.g. Coapur™ XS 22 <sup>(3)</sup>, Coapur™ 830 W <sup>(3)</sup>, hydrophobically modified polyether thickeners, e.g. Aquaflow® NHS 300 <sup>(4)</sup>, Aquaflow® NLS 205 <sup>(4)</sup>.

### COMPATIBILITY

SYNAQUA® 2080 may be used in combination with (styrene-)acrylic emulsions. However, the compatibility has to be carefully checked in each system.

### OTHER ADDITIVES

Defoamers such as Byk®-022 <sup>(5)</sup>, Byk®-028, Byk®-093 <sup>(5)</sup>, Surfynol® MD20 <sup>(6)</sup>, Surfynol® DF-58 <sup>(6)</sup>, FoamStar® ST 2438 <sup>(7)</sup>, Tego® Airex 902W <sup>(8)</sup> can be used without adversely affecting paint performance.

The correct choice of the dispersing agent is essential to ensure the maximum performance from the alkyl emulsion. Dispersing agents such as Coadis™ BR 85 <sup>(3)</sup>, for example or Disperbyk®-190 <sup>(5)</sup> can be used.

It is not recommended to use SYNAQUA® 2080 in the millbase.

Notes: <sup>(1)</sup> Allnex, <sup>(2)</sup> OMG Borchner GmbH, <sup>(3)</sup> Coatex, <sup>(4)</sup> Ashland Specialty Ingredients, <sup>(5)</sup> Byk, <sup>(6)</sup> Air Products, <sup>(7)</sup> BASF, <sup>(8)</sup> Evonik Tego Chemie GmbH

## PRODUCT SAFETY

Please refer to the corresponding Safety Data Sheet.

## STORAGE AND HANDLING

SYNAQUA® 2080 should be stored indoors in the original, unopened and undamaged container, in a dry place at storage temperatures between 5°C and 30°C. Exposure to direct sunlight should be avoided. The product is protected to prevent any microbial deterioration during normal conditions of storage but care should be taken to avoid accidental contamination during subsequent handling and processing. In the above mentioned storage conditions the shelf life of the resin will be from the shipping date.

Shelf Life (Months): 6

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