

## TECHNICAL DATA SHEET

# SYNAQUA® 3510 SW 80

Waterdilutable alkyd

### PRODUCT APPLICATION DETAILS

SYNAQUA® 3510 SW 80 is an after neutralisation water-reducible, saturated, hydroxyfunctional, modified polyester, designed especially for cross-linking with water emulsifiable polyisocyanates.

Finished coatings particularly show an excellent film surface comparable with the well-known quality of solvent based 2K-PU coatings. Additionally the mechanical characteristics and durability are also comparable. SYNAQUA® 3510 SW 80 is suitable to formulate high gloss, flexible finish coatings with less than 5% VOC. Favourably such paints can safely be worked on all commonly used modern coating equipment.

SYNAQUA® 3510 SW 80 is particularly recommended for use in high gloss 2-pack-coatings for industrial application. It is also suitable for primers and single coat paints. The high durability and long pot life give the opportunity for coating large vehicles. Even for wood coating these characteristics can be exploited using corresponding formulations.

### SALES SPECIFICATIONS

	CHARACTERISTICS	METHODS
Solid content (125°C)	79 - 81 %	ISO 3251
Reduced viscosity (4mm, 60% in DPGDME) (20°C)	60 - 90 s	DIN 53 211
Color (Iodine Colour index)	10 max	DIN EN 1557
Acid value	53 - 58 mg KOH/g	ISO 2114

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

	CHARACTERISTICS	METHODS
Viscosity (Brookfield RVT, 20 rpm, spindle 6) (23°C)	15000 - 25000 mPa.s	ISO 3219
Solvent	Dipropylene Glycol dimethyl ether (DPGDME)	-
Flash point	65 °C	ISO 3679
Density	1.07 g/ml	ISO 2811
Hydroxyl content	3.0 %	-

<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

- Industrial Coating
  - General Industry
  - Protective And Marine Coating
  - Wood Furniture

# SYNAQUA® 3510 SW 80

## FORMULATION GUIDELINES

### RECOMMENDATIONS FOR USE

SYNAQUA® 3510 SW 80 is, after neutralisation with suitable amines, well water-reducible. Further addition of organic solvent is not necessary. Using amino alcohols like amino methyl propanol (AMP) for neutralization, SYNAQUA® 3510 SW 80 is completely water-reducible at a pH of 7.0.

SYNAQUA® 3510 SW 80 is cured at room temperature using low viscous, aliphatic, water-emulsifiable polyisocyanates for linkage like Bayhydur® 3100 <sup>(1)</sup>, Desmodur® N 3600 <sup>(1)</sup> or Tolonate® HDT-LV <sup>(2)</sup>. For right calculation of the needed amount of isocyanate hardener the excessively existing reactive hydroxyl groups of the amino alcohol and also an excess of about 30 % of isocyanate for compensation of side reactions with the water in the paint system has to be taken in account.

### COMPATIBILITY

SYNAQUA® 3510 SW 80 is well compatible with water-emulsifiable epoxy resins. It has a limited compatibility with some acrylic and polyurethane emulsions.

### OTHER ADDITIVES

SYNAQUA® 3510 SW 80 shows very good pigment wetting and volume. All alcaliresistant pigments can be used considering that water soluble parts should not be contained.

For dispersion of pigments with difficult wettability wetting and dispersion additives like Efka® 4500 <sup>(3)</sup> or Disperbyk® 182 <sup>(4)</sup> are well suitable. As defoamer 0.5% of Byk®-020 <sup>(4)</sup> calculated on total paint is recommended and should be added to the mill base. To improve wetting on difficult substrates Byk®-346 <sup>(4)</sup> up to 0.6% on total paint can be used.

Notes: <sup>(1)</sup> Bayer MaterialScience, <sup>(2)</sup> Perstorp, <sup>(3)</sup> Ciba, <sup>(4)</sup> Byk

## PRODUCT SAFETY

Please refer to the corresponding Safety Data Sheet.

## STORAGE AND HANDLING

SYNAQUA® 3510 SW 80 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

**Headquarter: Arkema France**  
51, Esplanade du Général de Gaulle  
92800 Puteaux – France  
T +33 (0)1 49 00 80 80

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