

# SYNAQUA® 3510 SW 80

GENERAL INDUSTRY / INDUSTRIAL WOOD

ARKEMA COATING RESINS

## 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.

## Polymer Type

- Solventborne Polyester

## Sales Specifications

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

## Other Characteristics<sup>1</sup>

Viscosity at 23°C, mPa.s (Brookfield RVT, 20rpm, sp6) (ISO 3219)	15000 - 25000
Volatile	Dipropylene Glycol dimethyl ether (DPGDME)
Flash point, °C (ISO 3679)	65
Density / Specific Gravity at 20°C, g/ml (ISO 2811)	1.07
Hydroxyl Content, %	3.0

Note: Acid value and/or Hydroxyl value quoted relative to solid resin

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

## 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 (1), Desmodur® N 3600 (1) or Tolonate® HDT-LV (2). 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 (3) or Disperbyk® 182 (4) are well suitable. As defoamer 0.5% of Byk®-020 (4) calculated on total paint is recommended and should be added to the mill base. To improve wetting on difficult substrates Byk®-346 (4) up to 0.6% on total paint can be used.

Notes: (1) Bayer MaterialScience, (2) Perstorp, (3) Ciba, (4) Byk

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## Product Safety

Please refer to the corresponding Safety Data Sheet.

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## Storage & Handling

SYNAQUA® 3510 SW 80 should be stored indoors in the original, unopened and undamaged container, in a dry place at a temperature not exceeding 30°C. Exposure to direct sunlight should be avoided.

In the above mentioned storage conditions the shelf life of the resin will be 6 months from the shipping date

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