

SYNAQUA® 4804

ARCHITECTURAL COATINGS / GENERAL INDUSTRY

ARKEMA COATING RESINS

Product Application details

SYNAQUA® 4804 is a short oil alkyd emulsion designed for use in high performance decorative paints.

SYNAQUA® 4804 has been developed primarily for trim paints. The properties of the emulsion make it also suitable for other applications such as wall paints, exterior primers for wood or metal and corrosion resistant primers.

SYNAQUA® 4804 is formulated without alkylphenolethoxylates, and is ammonia-, solvent- and plasticiser- free.

Performance Benefits

- Extremely low VOC content (no requirement for coalescing solvents)
- High gloss potential
- Quick drying time
- Very good hardness development
- Low yellowing
- Good application characteristics
- Good stability with fillers and anticorrosive pigments

Polymer Type

- Alkyd Emulsion

Sales Specifications

Solid Content at 125°C, % (ISO 3251)	49 - 51
pH (ISO 976)	6.5 - 8.5
Viscosity at 23°C, mPa.s (Brookfield DVE, spindle1, 10rpm) (ISO 2555)	300 max

Other Characteristics¹

Appearance	White milky liquid
Volatile	Water
Density / Specific Gravity at 23°C, g/ml (ISO 2811)	1.07
Type of fatty acid	Linoleic rich
Fatty Acid content, %	37
Average Particle size, nm (ISO 13321)	300 max

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

Formulation Guidelines

DRIERS

It is recommended to use driers that have been especially developed for water based coatings. A suitable drier for SYNAQUA® 4804 can be the use of a plurimetalllic drier, for exp. Additol® VXW 6206 (1) 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 (2) at 0.5% on resin solids can also be used. Unlike solvent-based alkyds no antiskinning agent is required when formulating with SYNAQUA® 4804.

RHEOLOGY

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

COMPATIBILITY

SYNAQUA® 4804 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 (5), Byk®-028, Byk®-093 (5), Surfynol® MD20 (6), Surfynol® DF-58 (6), FoamStar® ST 2438 (7), Tego® Airex 902W (8) can be used without adversely affecting paint performance.

SYNAQUA®

The correct choice of the dispersing agent is essential to ensure the maximum performance from the alkyd emulsion. Dispersing agents such as Coadis™ BR 85 (2), for example or Disperbyk®-190 (5) can be used.

It is not recommended to use SYNAQUA® 4804 in the millbase.

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

Product Safety

Please refer to the corresponding Safety Data Sheet.

Storage & Handling

SYNAQUA® 4804 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 6 months from the shipping date

The statements, technical information and recommendations contained herein are believed to be accurate as of the date hereof. Since the conditions and methods of use of the product and of the information referred to herein are beyond our control, Arkema expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information; NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE GOODS DESCRIBED OR THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be applicable when such product is used in combination with other materials or in any process. The user should thoroughly test any application before commercialization. Nothing contained herein constitutes a license to practice under any patent and it should not be construed as an inducement to infringe any patent and the user is advised to take appropriate steps to be sure that any proposed use of the product will not result in patent infringement. See SDS for Health & Safety Considerations.

Arkema has implemented a Medical Policy regarding the use of Arkema products in medical devices applications that are in contact with the body or circulating bodily fluids (<http://www.arkema.com/en/social-responsibility/responsible-product-management/medical-device-policy/index.html>) Arkema has designated medical grades to be used for such medical device applications. Products that have not been designated as medical grades are not authorized by Arkema for use in medical device applications that are in contact with the body or circulating bodily fluids. In addition, Arkema strictly prohibits the use of any Arkema products in medical device applications that are implanted in the body or in contact with bodily fluids or tissues for greater than 30 days. The Arkema trademarks and the Arkema name shall not be used in conjunction with customers' medical devices, including without limitation, permanent or temporary implantable devices, and customers shall not represent to anyone else, that Arkema allows, endorses or permits the use of Arkema products in such medical devices.

It is the sole responsibility of the manufacturer of the medical device to determine the suitability (including biocompatibility) of all raw materials, products and components, including any medical grade Arkema products, in order to ensure that the final end-use product is safe for its end use; performs or functions as intended; and complies with all applicable legal and regulatory requirements (FDA or other national drug agencies). It is the sole responsibility of the manufacturer of the medical device to conduct all necessary tests and inspections and to evaluate the medical device under actual end-use requirements and to adequately advise and warn purchasers, users, and/or learned intermediaries (such as physicians) of pertinent risks and fulfill any postmarket surveillance obligations. Any decision regarding the appropriateness of a particular Arkema material in a particular medical device should be based on the judgment of the manufacturer, seller, the competent authority, and the treating physician.

Arkema Coating Resins

420, rue d'Estienne d'Orves

92705 Colombes Cedex - France

arkema.com - arkemacoatingresins.com