



FAKOLITH[®]
chemical systems

a Fakolith Group Company

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Colorless FoodGrade varnish suitable for direct and indirect food contact, wood, food displays, utensils, 3D printing parts and others surfaces of the food industry.

Description of the problem

There are many surfaces in the food industry that must be painted to be suitable for direct or indirect contact with food. The surfaces can be very varied such as barrels, casks and cooperage for wine and beverages in general, displays, shelves, trays, wooden elements and other materials for serving food, parts from 3D printers, utensils, open surfaces of ceilings and walls, etc. Fakolith offers various varnish solutions certified for compliance with the European Regulation EU 10/2011 and its subsequent amendments, and also for the American Regulation FDA 21 CFR 175.300. All Fakolith FoodGrade coatings are treated with food contact antimicrobial technology BioFilmStop Green, which helps to inhibit the nesting of bacteria, biofilm and viruses that cause foodborne toxiinfections, thus increasing food and health safety.



Summary of the most common basic solution and procedure

Due to the diversity of existing surfaces, there is no single food contact varnish that can cover all applications, so we recommend that you check the following options to find the one that best suits your case. Starting from clean and dust-free bases, and especially on wood, where the usual sanding and dust extraction processes must also be followed, the following options are currently available:

- **Option A - VARNIPACK FOODGRADE:** It is an innovative water-based varnish and overprint varnish, fast drying and thin layer, suitable for direct and indirect contact with food, which is presented as the most avant-garde option, both for the packaging industry of MDF, cardboard and similar, as in other multiple wood surfaces or derivatives. For surfaces that require good hardness, medium physical-chemical stress, with easy renovation and maintenance. It has double certification EU 10/2011 and FDA 21 CFR 175.300, which broadens its field of use.
- **Option B - FAKOLITH FK-100 FOODGRADE Varnish:** When maximum physicochemical performance is required, and the highest direct food contact compatibility in accordance with EU 10/2011 FDA 21 and/or CFR 175.300, the amber varnish version of FK-100 FoodGrade (BPA Compliant) food epoxy may be the most suitable choice.

Application process

1.- OPTION A - VARNIPACK FoodGrade (Multipurpose)

FEATURES: Varnipack FoodGrade is a colourless, thin-layer, fast air-drying, 1-component aqueous dispersion multipurpose varnish, certified and suitable for direct and indirect contact with food according to European Regulation EU 10/2011 and American Regulation FDA 21 CFR 175.300. Food contact varnish with glossy-satin finish, formulated with modified acrylic copolymers, free of Bisphenol A (BPA free), APEO, formaldehyde, phthalates,

heavy metals..

VarniPack FoodGrade is air-drying and/or forced drying with hot air or infrared lamps, and has an ideal balance of performance in its category:

- High resistance to humidity, water and grease.
- Balanced barrier and transpiration functions.
- Excellent transfer, wetting and leveling.
- Balanced flexibility, adhesion,
- Good resistance to dry and wet rubbing.
- Good resistance to blocking
- Excellent gloss finish and transparency.
- Low Voc and low odor.
- It is not dangerous goods neither for its use, nor for its transport by road, sea or air.
- Declaration of Conformity- Compliance Declaration
- Applicable by brush, roller, Airless or Air-Mix.

Product treated (BPR Art 3 and 58) with BioFilmStop FG antimicrobial technology (optional), specific FoodGrade version, highly effectiveness tested against bacteria and other pathogenic microorganisms such as coronavirus, and always according to EU 10/2011 and FDA 21 CFR 175.300 regulations. ISO 22196 and ISO 21702 effectiveness test (Escherichia coli, Listeria monocytogenes, Bacillus subtilis, Pseudomonas aureginosa, Staphylococcus aureus, Salmonella enteritidis, Legionella pneumophila, Human and Feline Coronavirus). The paints and coatings of the Fakolith FoodGrade range contribute to the positive compliance with CE 852/2004, are manufactured under HACCP and Good Manufacturing Practices (GMP) according to CE 2023/2006 and/or FDA 21 CFR 174.5, improving the hygiene, food and health safety of surfaces and environments.

FIELDS OF USE: Mainly used in direct, indirect or occasional contact with food, and in general wherever maximum safety is sought. For the protection and varnishing of parts and **surfaces** of wood and wood derivatives **up to medium physicochemical stress**, such as shelves, displays, cooperage, wooden surfaces, on painted surfaces, and some plastics, synthetics and 3D printing materials, etc. in food and auxiliary industry, health sectors, in industry, civil works and public and private buildings in general. (For surfaces with high physical-chemical stress, use our FoodGrade epoxy range such as FK-45, FK-100).

APPLICABLE: By brush, roller, Airless or Air-Mix.

PERFORMANCE: Depending on the situation, type of base and subsequent use, we recommend between 50 -100 ml/m², applied in thin layers.

Product for professional use. For a correct application follow the instructions in the technical sheets, application guides and safety data sheets. In case of doubt, consult our technical service.

NOTE: [See here](#) for our special version for single or repeated use food packaging in printed MDF packaging, paper and cardboard packaging, labels, wood packaging and other derivatives. **A BioBased version of Varnipack FoodGrade, Varnipack FoodGrade BioHybrid** is also available and significantly reduces the carbon footprint.

1.- OPTION B - FK-100 FoodGrade Varnish

PRODUCT SUMMARY: FK-100 FoodGrade is a 100% solid, 2-component epoxy food contact bio-hybrid paint, with double certification for direct contact with food and beverages, the European EU 10/2011, and the American FDA 21 CFR 175.300. High performance paint, low Voc, low bio-based odor, gloss finish, with CE marking tests and excellent anticorrosive and physicochemical resistance in its category. Especially indicated for the protection and painting of surfaces in direct, occasional and indirect contact with food, beverages, water for food processing and drinking water.

Product treated (BPR Art 3 and 58) with BioFilmStop FG antimicrobial technology, specific FoodGrade version, highly effectiveness tested against bacteria and other pathogenic microorganisms such as coronavirus, and always according to EU 10/2011 and FDA 21 CFR 175.300 regulations. ISO 22196 and ISO 21702 effectiveness test (Escherichia

coli, Listeria monocytogenes, Bacillus subtilis, Pseudomonas aureginosa, Staphylococcus aureus, Salmonella enteritidis, Legionella pneumophila, Coronavirus Feline). The paints and coatings of the Fakolith FoodGrade range contribute to the positive compliance with CE 852/2004, are manufactured under HACCP and Good Manufacturing Practices (GMP) according to CE 2023/2006 and/or FDA 21 CFR 174.5, improving the hygiene, food and health safety of surfaces and environments.

FIELDS OF USE: Following the technical indications for each system, FK-100 FoodGrade can be applied inside silos, tanks and pipes, walls, ceilings, skirting boards, floors, metal structures, machinery and equipment, large aquariums and fish farms, cold and freezing rooms, food warehouses, panels, food transport, etc., always indoors. Especially in the food industry and healthcare sectors, hospitals and clinics, and also in industry, civil works and public and private buildings in general. Compatible with most mineral surfaces, concrete, sandblasted metals SA 2,5 Rz>50, metals properly primed, lacquered panels and on other paints and / or compatible primers well bonded and other surfaces resistant to cut-cross test Class 0-1 UNE-DIN EN ISO 2409:2007 and traction EN ISO 4624:2016 Rigid Systems: $\geq 1,0$ (0,7) b N/mm². (Without traffic loads) and: $\geq 2,0$ (1,5) b N/mm² (With traffic loads).

STANDARD COLORS: Pearl White RAL 1013, Oxide Red RAL 3009 and Grey RAL 7004 (Please check availability, price and minimum required quantity for other colors from our FoodGrade chart or other RAL colors, except white which is not available in this product).

APPLICABLE with brush, roller, Airless or AirMix preferably heated.

With Declaration of Compliance, Performance and CE marking.

PAINT AVERAGE YIELD: according to recommended coat thickness, depending on use of FK-100 FoodGrade

- Dry thickness = Wet thickness: 200 μm - consumption is 265 gr/m² - a yield of 3,77 m²/kg.
- Dry thickness = Wet thickness: 300 μm - consumption is 395 gr/m² - a yield of 2,53 m²/kg.
- Dry thickness = Wet thickness: 350 μm - consumption is 463 gr/m² - a yield of 2,16 m²/kg.
- Dry thickness = Wet thickness: 400 μm - consumption is 530 gr/m² - a yield of 1,89 m²/kg.
- Dry thickness = Wet thickness: 500 μm - consumption is 660 gr/m² - a yield of 1,51 m²/kg.
- Dry thickness = Wet thickness: 700 μm - consumption is 925 gr/m² - a yield of 1,08 m²/kg.

VARNISH AVERAGE YIELD:

- Dry thickness = Wet thickness: 50 μm - consumption is 51,5 gr/m² - a yield of 19,4 m²/kg.
- Dry thickness = Wet thickness: 75 μm - consumption is 77,3 gr/m² - a yield of 12,9 m²/kg.
- Dry thickness = Wet thickness: 100 μm - consumption is 103gr/m² - a yield of 9,7 m²/kg.

For a correct application follow the indications in the technical sheets, application guides and safety data sheets. In case of doubt consult our technical service.

IMPORTANT NOTE:

This application guide is a general recommendation. On particular cases there may be additional recommendations or variations. Consult your doubts and recommended plan of subsequent maintenance with our Technical Department through the contact form of this web. If you want a Personalized Technical Prescription, [contact us](#) and send us the completed Check List of the Food-Health Industry available in the section "Application Guides".

APPLICATION GUIDES LEGAL ADVICE:

FAKOLITH CHEMICAL SYSTEMS, S.L.U. (FCS) applies a quality management system, and manufactures under HACCP for the food industry and health sectors, among others. Fakolith is certified by TÜV Rheinland Cert GmbH for ISO 9001: 2015 standard. FCS is a company of the FAKOLITH group in Spain, dedicated to developing, manufacturing, importing and commercializing paints and special industrial treatments. As our corporate purpose reflects, the legal responsibility for the application of the products is always out of our reach. FCS has a policy of R.C. of products with international coverage, except USA and Canada, of up to three million euros for damages caused by possible manufacturing defects.