



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 toxiifections, 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 - DISPERLITH FOODGRADE ELASTIC Varnish:** It is our first FoodGrade water-based varnish, suitable for direct and indirect contact with food, for multiple wood surfaces or derivatives, which also require adequate elasticity, medium physical-chemical stress, and easy renewal and maintenance. It is EU 10/2011 certified.
- **Option C - FAKOLITH FK-45 FOODGRADE Varnish:** When maximum physicochemical performance is required, and the highest compatibility for direct food contact in accordance with EU 10/2011, FK-45 FoodGrade (BPA Compliant) food grade epoxy varnish may be the most suitable choice.

Application process

1.- OPTION A - VARNIPACK FoodGrade

FEATURES: Varnipack FoodGrade is a colourless, thin-layer, air-drying, 1-component aqueous dispersion 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 and its subsequent amendments. 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 fast drying, high resistance to humidity, excellent transfer, ideal balance between resistance and flexibility, no tacking or blocking after curing, wet scrub resistance class 1, low Voc, very low odour, barrier function, and excellent finish when is applied in thin layers. It is not a dangerous good for use, for transport by road, sea or air.

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: Varnipack FoodGrade is especially indicated for the protection and varnishing of surfaces of up to medium physical-chemical stress, in direct, indirect or occasional contact with food, both in single-use and repeated packaging, especially in the sector of MDF printed food packaging, cardboard, labels, wood, derivatives and others. Also used in the exterior part of wine and liquors barrels and in wooden surfaces such as shelves for curing or displaying foodstuffs and other compatible surfaces. To mark and protect non-edible food barks and peels, 3D printed parts. Mainly used in the printed food packaging sector, also in health care sectors... hospitals, clinics, in industry, civil works, public and private buildings in general.

APPLICABLE by brush, roller, airless or air-mix, anilox rollers in the flexographic and offset industry, industrial spraying. Always apply thin coats.

With Declaration of Compliance.

PERFORMANCE: Depending on the situation, type of base and subsequent use, we recommend between 12.5 ml. and 100 ml, 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.

1.- OPTION B - DISPERLITH FoodGrade Elastic

FEATURES: Disperlith FoodGrade Elastic water-based 1-component paint or colorless varnish, certified for direct and indirect contact with food and drinking water, according to European Regulation EU 10/2011 and its subsequent amendments. Food contact paint formulated with modified acrylic copolymers, Bisphenol A free (BPA free), with good coverage, excellent balance between high impermeability, elasticity and good adhesion, low odor, fast drying, applicable from low temperatures (>3°C). It has EC marking tests that confirms an excellent physicochemical resistance in its category.

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: Especially suitable for the protection and painting of surfaces up to medium physical-chemical

stress, in direct, indirect or occasional contact with food, water for food processing and drinking water. As a finish for open surfaces such as walls, ceilings at indoors and outdoors, on objects and other surfaces, and in immersion in concrete tanks for drinking water.

Mainly used in the food industry but also in the health sector, hospitals, clinics, industry, civil engineering, and public and private buildings in general. Certified for clean rooms.

SERIAL COLORS: Standard colours: Colorless varnish, White RAL 9003, Light Ivory RAL 1015, Oxide Red RAL 3009, Grey RAL 7004, Green RAL 6002, Blue RAL 5012, Yellow RAL 1003 and Black RAL 9017 (Check availability, price and minimum quantity for other FoodGrade Color card or other RAL colours).

APPLY with brush, roller, Airless or Air-Mix.

AVERAGE YIELD: DISPERLITH FoodGrade Elastic has an approximate yield of 3-5 m²/l. in 2 coats for painting and up to 6-19 m²/l. for varnishing. Depending on the texture and absorption of the base it can vary sensibly.

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.

1.- OPTION C - FK-45 FoodGrade

PRODUCT SUMMARY: FK-45 FoodGrade is a 2-component epoxy food contact paint or varnish, with very high solids content, certified for direct and indirect contact with food, according to the European regulation EU 10/2011. High performance paint, low Voc, low odor, gloss finish, with CE marking tests and excellent physicochemical resistance in its category. Especially indicated for the protection and painting of surfaces in direct 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 instructions for each system, FK-45 FoodGrade can be applied inside silos and tanks and pipes, and given its high physical-chemical resistance, it is also highly recommended for direct indirect and occasional contact on walls, ceilings, skirting boards, floors, metal structures, machinery and equipment, cold and freezing rooms, food warehouses, panels, food transport, objects, 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: ≥1,0 (0,7) b N/mm². (Without traffic loads) and: ≥2,0 (1,5) b N/mm² (With traffic loads).

STANDARD COLORS: Transparent varnish, White RAL 9003, Light Ivory RAL 1015, Oxide Red RAL 3009 and Grey RAL 7004, Green RAL 6002, Blue RAL 5012, Yellow RAL 1003 and Black RAL 9017 (Please check availability, price and minimum required quantity for other colors from our FoodGrade chart or other RAL colors).

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

With Declaration of Compliance, Performance and CE marking.

AVERAGE YIELD PAINT: according to recommended coat thickness, depending on use of FK-45 FoodGrade

- Dry thickness 200 µm = wet 302 gr/m² (222 ml/m²) - yield 3,31 m²/kg (4,5 m²/L).

- Dry thickness 300 μm = wet 453 gr/m^2 (333 ml/m^2)- yield of 2,21 m^2/kg (3,00 m^2/L).
- Dry thickness 350 μm = wet 528 gr/m^2 (389 ml/m^2)- yield of 1,90 m^2/kg (2,57 m^2/L).
- Dry thickness 400 μm = wet 604 gr/m^2 (444 ml/m^2)- yield of 1,66 m^2/kg (2,25 m^2/L).
- Dry thickness 500 μm = wet 755 gr/m^2 (555 ml/m^2)- yield of 1,32 m^2/kg (1,80 m^2/L).
- Dry thickness 700 μm = wet 1058 gr/m^2 (778 ml/m^2)- yield of 0,95 m^2/kg (1,28 m^2/L).

AVERAGE YIELD TRANSPARENT VARNISH:

- Dry thickness 50 μm = wet 58 gr/m^2 (53 ml/m^2)- yield of 17,27 m^2/kg (18,87 m^2/L).
- Dry thickness 75 μm = wet 87 gr/m^2 (79 ml/m^2)- yield of 11,49 m^2/kg (12,66 m^2/L).
- Dry thickness 100 μm = wet 116 gr/m^2 (105 ml/m^2)- yield of 8,63 m^2/kg (9,52 m^2/L).

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.