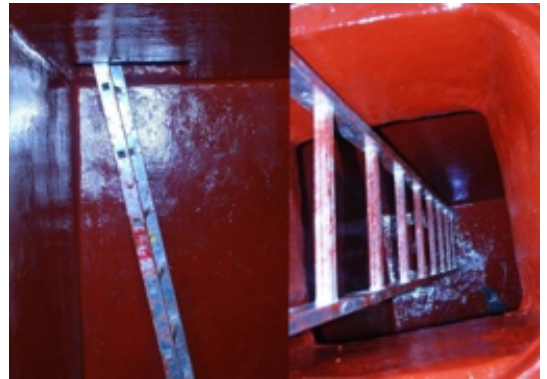




Painting concrete tanks and other mineral bases with certified foodgrade paint for direct and indirect contact with food, beverages and drinking water.

Description of the problem

Painting and/or repairing concrete tanks or other equivalent mineral bases, so that they are suitable for contact with food, beverages, drinking water used in food processing, in the agricultural industry, or water for human and animal consumption, is a very serious matter that requires suitable products that meet the requirements and tests that the EU Regulation 10/2011 and or FDA CFR21 175.300 specifies, both for the producer and for each marketed product suitable for contact with food. In any case, the manufacturer must provide the customer the detailed Declaration of Conformity (Compliance Declaration), Performance Declaration and CE marking test, of each product.



Fakolith, with Sanitary Registration ES-39.005259/T for the manufacture of materials in contact with food, is periodically inspected by the health authority, and has FoodGrade paints, varnishes and coatings with all the documentation and tests that guarantee their suitability for direct and indirect contact, with solutions tested for all food groups, liquids or solids, and for prolonged storage. In addition, when we talk about tanks, we must not forget that we are generally talking about confined spaces, so the application company, apart from adequately preparing the base, must follow specific PPE procedures and mandatory safety measures. Within our high performance range, the most current and versatile standard is the Heavy-duty food contact epoxy coating **FK-100 FoodGrade** (100% solids, free of solvents and benzyl alcohol, organoleptically harmful for many foods, especially for wines that characterize them with an unpleasant taste very close to that of bitter almonds), which is EU and FDA certified at the same time, and which are complemented by the required outdoor **FAKOPUR FoodGrade** (2-component polyurethane). All Fakolith FoodGrade food contact coatings are treated with BioFilmStop Green antimicrobial food technology, which helps to inhibit the nesting of bacteria, biofilm and viruses that cause foodborne illnesses, thus increasing food and sanitary safety. We recommend consulting our "[High Solids Epoxy Application Guide](#)" before starting work with these paints. Regardless of major repairs, the painting or repainting of a mineral food tank, as a minimum and in general, would take into account the following basic options.

Summary of the most common basic solution and procedure

The ideal pre-treatment to ensure maximum adhesion to the base would be the complete removal of previous layers of existing paint, with mechanical processes such as sandblasting, or equivalent, and/or chemical stripping (for example, with **Oxystrip**), until a mineral base with sufficient consistency and tensile strength. If necessary, major damages should be repaired with suitable mortars (**Elite Extreme**) and/or fillers (**FK-45 FG Plaster**). If repainting is chosen, we recommend at least a superficial sanding of the existing paint and checking its correct adherence by a Class 0 Cut-Cross Test. The following process will involve the adequate cleaning and drying of the base, then painting with one of the following paints from the FoodGrade range, with or without fiberglass reinforcement mesh, as appropriate.

1. SURFACE CLEANING:

- **Option A - FAKOLITH FK-12:** If the base has been shot-blasted or is already free of previous paint, the cleaner will be applied with subsequent rinsing with water, to eliminate leaving the pores of the pavement clean and free of dust, moisture damage, saltpetre, micro-organisms, etc. After drying, the base is ready for the next treatment.
- **Option B - FAKOLITH FK-111:** If on the other hand, there are layers of previous paints and it has been decided to repaint, we recommend to apply the descaler and cleaner of grease, pollution, industrial dirt, etc., with subsequent rinsing with water, to remove the dirt. Allow to dry completely before painting.

2. SURFACE PAINTING:

Final painting between 2 to 4 coats with Fakolith FoodGrade food grade epoxy or polyurethane paint, whichever is more convenient in each case. Depending on the application, environmental and environmental conditions, we recommend diluting the epoxy range up to 10% with [FK-45 OEM Solvent FG](#), a food grade solvent, to provide better wetting, leveling and pot-life extension if necessary. See application details in its Technical Data Sheet.

- **Option A - FAKOLITH FK-100 FOODGRADE:** When the highest physical-chemical resistance in its category is required. Recommended in general and especially when the food or beverage to be contained is liquid and is in metal tanks. It has the most extensive EU and FDA certification in the market. In addition, FK-100 FoodGrade as a partially biobased epoxy paint has an exemption for not being considered dangerous goods for transport by road, sea or air. (Alternatively can still be used [FAKOLITH FK-45 FOODGRADE](#) or [FAKOLITH FK-45 FOODGRADE HYGIENIC.](#))
- **Option B - FAKOPUR FOODGRADE:** 2-component polyurethane paint, especially recommended for outdoor situations or exposed to UV light.

Application process

1.- OPTION A - FK-12

PRODUCT SUMMARY: Concentrated water-based detergent cleaner, free of chlorine and formaldehyde, biodegradable and compatible with moisture. Wide range of applications and sectors, for use both indoors and outdoors, on horizontal and vertical surfaces.

For cleaning moisture damage on surfaces of various materials; saltpetre blooms, lime blooms, surface damage caused by the action of microorganisms such as mould, moss, bacteria and biofilm matrix, as well as medium-grade pollution. Mainly used in industry in general, food industry, health sector, establishments in general, restoration of facades and heritage, civil works.

It presents a notorious descaling power of penetration, leaving the pore of the base, clean, open and receptive for later treatments; consolidators, protectors, waterproofing impregnations, primers, paints and coatings, anti-graffiti protections, etc. Its tensoactive components facilitate the neutralization of the base, after rinsing with water. With Declaration of Conformity.

MODE OF APPLICATION: Application from concentrated to dissolved 1:4 in water as a general rule. Adapt the dissolution according to the needs and conditions of each surface. The higher the concentration, the faster the action, and the higher the capacity to clean the damage. Especially to eliminate lime and microorganisms in wood will be applied without dilution.

Once the dissolution is done, apply preferably from the upper area, with brush, sponge, mop, spray, as appropriate in each case:

- Insist where the reaction is triggered and rub the affected area with brushes.
- Rinse with water before the product and the dissolved dirt dry.
- Allow to dry before proceeding with other treatments.

CONSUMPTION - PERFORMANCE: It is very variable, depending on the solution used, type and absorption of the surface, method of application, type and degree of dirt or affection, so its average performance can vary between 4

m² and 15 m² per litre of concentrate.

1.- OPTION B - FK-111

DESCRIPTION AND MAIN USE: FAKOLITH FK-111 is a detergent cleaner for use with grease-based dirt or grime, pollution, biofilms matrix, scorching or industrial grime in general, on surfaces resistant to alkaline solutions. Mainly for use in the food industry, industry in general, construction and civil engineering. Health Register FAKOLITH RGSEAA ES-39.005259/T y ROESP E-0043-E.

RECOMMENDED THINNER: 1 part FK-111 to 4 parts water. Can also be used undiluted if necessary, in more contaminated areas or when speed of action is required.

HOW TO APPLY: Carefully protect all surfaces that are not to be treated from splashing. Apply diluted FK-111 using spray guns, brushes or rollers and immediately activate the product by scrubbing with a brush with stiff plastic bristles, working particularly on the worst affected areas. Allow 15-20 minutes to pass, although always before it has dried, and then wash off and rinse thoroughly using water under pressure. If so required the operation can be repeated. Leave to dry before going ahead with possible additional treatments. For further details consult the specifications sheet and/or application guidelines, along with the safety sheet.

AVERAGE YIELD: Undiluted FK-111 provides a yield of approx. 8-12 litres/m², although depending on the extent of the contamination this may vary considerably.

2.- OPTION A - FK-100 FoodGrade

PRODUCT SUMMARY: FK-100 FoodGrade is a 2-component heavy-duty food contact epoxy coating, 100% solids and partially bio-based, , and with double certification for direct contact with food, the European EU 10/2011 and the American FDA 21 CFR 175.300. High performance and high thickness coating, low Voc, low odor bio-based, gloss finish, with CE marking tests, and tested excellent anticorrosive and physicochemical resistance in its category. Particularly suitable for the protection, renovation, and painting of surfaces in direct, occasional or indirect contact with food, beverages, water for food processing and drinking water.

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: ≥1,0 (0,7) b N/mm². (Without traffic loads) and: ≥2,0 (1,5) b N/mm² (With traffic loads).

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.

STANDARD COLORS: Pearl White RAL 1013, Oxide Red RAL 3009 and Grey RAL 7004, Blue RAL 5012, Green RAL 6002 and Transparent Amber Varnish. (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.

2.- OPTION B - FAKOPUR FoodGrade

PRODUCT SUMMARY: FAKOPUR FOODGRADE is a 2-component, solvent-based, high solids, aliphatic isocyanate acrylic polyurethane food contact paint, certified for direct, indirect and occasional contact with food, in accordance with EU Regulation 10/2011. High performance paint, resistant to outdoors, satin finish, with CE marking tests and excellent physicochemical resistance in its category. Particularly suitable 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 version for food contact, with high effectiveness tested against bacteria and other pathogenic microorganisms such as coronavirus, and always in accordance with EU 10/2011 and FDA 21 CFR 175.300 regulations. Effectiveness test ISO 22196 and ISO 21702 (Escherichia coli, Listeria monocytogenes, Bacillus subtilis, Pseudomonas aureginosa, Staphylococcus aureus, Salmonella enteritidis, Legionella pneumophila, Feline Coronavirus). The paints and coatings of Fakolith's foodgrade contribute to positively comply with EC regulation 852/2004, are manufactured under HACCP and Good Manufacturing Practices (GMP) according to EC 2023/2006 and/or FDA 21 CFR 174.5, improving hygiene and food and sanitary safety of surfaces and environments.

FIELDS OF USE: Following the technical indications for each system, it is mainly applied in outdoor situations of direct, indirect and occasional contact, in silos and tanks, ponds, culture pools, hoppers, troughs, floors, walls, equipment and tools, food warehouses, panels, food transport, objects, aquaculture... or indoors where a polyurethane is more convenient than an epoxy due to its properties. Especially for use in the food industry and primary sectors of agriculture, livestock and fisheries. Its excellent insulating qualities and vapor barrier effect, make it work as an excellent waterproofing on concrete, as a protective finish for metals in combination with anticorrosive primers compatible. FAKOPUR FoodGrade has in general good adhesion on various consistent bases and suitable roughness, concrete, mineral bases, properly primed metals, wood, compatible primers... Compatible with most consistent surfaces: Tensile strength EN ISO 4624:2016 Rigid Systems: ≥1.0 (0.7) b N/mm². (No traffic loads) and: ≥2,0 (1,5) b N/mm² (With traffic loads), Surfaces with adequate roughness Rz>50, both on mineral bases, as well as properly sandblasted (SA 2,5) or primed metals, Lacquered panels and compatible previous paints and/or primers, well adhered and resistant to the ISO 2409:2007- Class 0-1 grating shear test.

SERIAL COLORS: White RAL 9003 and Grey RAL 7004, (Consult availability, price and minimum quantity for other FoodGrade colors or other RAL colors).

APPLICABLE with brush, roller, Airless or Air-Mix preferably heated.

AVERAGE YIELD: according to recommended film thickness depending on the use of FAKOPUR FoodGrade.

- For a dry film thickness of 50 µm - 100 ml/m² are consumed - yielding 10 m²/l.
- For a thickness of 100 µm dry - 200 ml/m² are consumed - yielding 5 m²/l.
- For a dry thickness of 150 µm - 300 ml/m² are consumed - yielding 3.3 m²/l.

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

IMPORTANT NOTE: According to the latest update of [Regulation \(CE\) n.o 1907/2006](#), specific mandatory training is required for a safe use and handling of this product. For further information, consult TDS on its 3rd page.

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.