



FoodGrade Paints: suitable for Direct Contact with Food and Beverages
EU & FDA



FAKOLITH[®] Food Contact & Hygienic Coatings

Surfaces you can trust



BioFilmStop Paints: against Dampness, Biofilm, Bacteria, Mold, Yeast...



LEADER IN CERTIFIED PAINTS FOR THE FOOD INDUSTRY

Fakolith has been present on the international foods stuffs market for over than 50 years. In this brochure we let at disposal of the food industry and the whole food chain suppliers, practical and innovative solutions with paaints and safety vanishes, suitable for painting and protect surfaces which are in direct and indiect contact with food and beverages, as well as paints and varnishestreated against BioFilm, baterias, mold and yeast, for the protection and hygiene in facilities, environments and their manufactures.

Fakolith complies with all applicable standard rules, being audited by TÜV Rheinland in its quality system, with the specialty of paints for the food-sanitary industry. Health Registry ES-39.005259 / T and manufacturer of pesticides ROESP E-0043-E. Fakolith applies its HACCP in collaboration with the CNTA (Spanish National Center for Technology and Food Safety), and we are also partner in several official R&D&I projects.



FAKOLITH
chemical systems

INSPECTION

Passed
Failed

AVOID RISKS



Paint systems with application o all the food industry supply chaine

- Floors, pavements, walls, ceilings, sandwich panel...
- White-Clean rooms GMP-GLP...
- Cold rooms, refrigerating chambers, freezing chambers...
- Tanks, silos, cisterns, containers, ducts, pipes...
- Machinery and facilities
- Transport elements, trailers, refrigerated trucks...
- Special packaging of wood and derivatives, MDF, etc.
- Industrial food packaging solutions, eps, wood, carboard...
- Objects; Shelves, lids, plates, cages, etc.
- Ad hoc solutions developed by our Dtp. de R+D+I



- Meat industry
- Fish, seafood and canning industry, aquaculture...
- Dairy and Cheese industry
- Wines, beers, water and beverages
- Sugar, cocoa, chocolate, bread, pastries
- Alimentary Pasta, flours, cereals, milled products
- Animal feedingstuffs, food additives
- Suppliers of the food chain
- Food Packaking, etc.

Wide range of paints, varnishes, products and services:



MAIN PRODUCTS

Paints and varnishes in a wide variety of colors, water dispersions, BPA compliant or BPA free epoxy, polyurethanes, hybrids and other innovations for bringing solution to unsolved problems.

COMPLEMENTARY PRODUCTS

Complet application systems, from start to finish: cleaners, strippers, consolidators, water repellents, mortars, mastics...in almost all kind of bases and environments of the food industry.

TOTAL SOLUTION

Technical service pre-in-post sale, checklist and online technical prescription, samples, training courses, budgets software, certificates and compliance declarations, official tests...

More info in www.foodgradepaint.com

Paints with intelligent technologies guaranteed by Official Research



Stops the growth of fungi, bacteria and biofilm



are suitable for direct contact with food and beverages



with safe BPA limited migration (BPA Compliant)



with alternative resin Free of Bisphenol A (BPA Free)



and prevent from the growth of bacteria and biofilm



and also are conserved with alternative food technologies to biocides

FDA & EU FOODGRADE PROJECT. "Development of coatings through the use of safe and environmentally friendly preservatives", Official R&D&I technological innovation project, with expedient RTC-2014-2020-5. The overall budget for which was EUR 491,101.60, and was partially funded by the Spanish Ministry of the Economy and Competitivity, under the 2017 subprogram CHALLENGES-COLLABORATION. In progress.

FDA & EU FOODGRADE PROJECT. Development of Paints and Coatings suitable for direct contact with food according to EU Regulation 10/2011 and FDA CFR 21 175.300 ", an official R&D&I project on Technological Innovation, with RTC-2016-5067-2 file and whose overall budget is € 548,784 which has been partially funded by the Ministry of Economy and Competitiveness, under the 2013-2016 program CHALLENGES-COLLABORATION. Finished successfully.

FOODTECH&COATINGS PROJECT. "Development of Alternative, Safe and Sustainable Preservatives for Application in Water-Based Coatings for the Food Industry", Official R&D&I technological innovation project, with expedient RTC-2014-2020-5. The overall budget for which was EUR 491,101.60, and was partially funded by the Spanish Ministry of the Economy and Competitivity, under the 2013-2016 subprogram CHALLENGES-COLLABORATION. Finished successfully.

APLICONs PROJECT. "Antimicrobial Based Nanotechnology Paints", Official R&D&I technological innovation project, expedient IPT-2011-1499-900000 , with an overall budget of EUR 1,001,439.15. Partially funded by the Spanish Ministry of Science and Innovation, within the INNFACTO, sub-program, forming part of the Spanish National Plan for Scientific Research, Development and Technological Innovation 2008-2011. Finished successfully.

TECNOCAI PROJECT. "Efficient and Intelligent Technologies oriented to Health and Comfort in Indoor Environments", Official R&D&I basic investigation project, expedient CEN-20091010,, with an overall budget of EUR 19,859,841.00 ,with EUR 684,140.00 specifically provided by FCS, partially funded by the CDTI (Spanish Centre for Technological Industrial Development), Within the CENIT-E Program. Finished successfully.

LIFE MINOX-STREET PROJECT. "Monitoring and Modelling NOx Removal Efficiency of Photocatalytic Materials: A Strategy for urban air quality management" approved at the LIFE 2012 Meeting, Expedient LIFE12 ENV/ES/000280. The budget was EUR 1,982,619 .00, of which the European Union funded 46,23% (€ 916,913.00). FCS contributed with its PhotoActive photocatalytic products range.

A way to build Europe



EUROPEAN UNION
European Regional Development Fund



INNOVATIVE SME

Valid until Dec. 31st 2018



DIRECT CONTACT WITH FOODSTUFFS:

All paints and varnishes suitable for direct and indirect contact with foods and beverages (including those that may occasionally be, such as condensation drops from ceilings and other surfaces) must comply with extensive legislation that affects the manufacturer and the product. European (EU) and American (FDA) legislation are very strict, extensive and complex, so it is necessary to verify the compulsory Declaration of Compliance.

Compulsory Declaration of Compliance

In order to verify, either by the Sanitary Inspection and the consumer, that a manufacturer and its products (in our case paints and varnishes suitable for direct and indirect contact with food and drinks) complies with all legal food and health safety requirements, the manufacturer is obliged to issue the DECLARATION OF COMPLIANCE of each commercialized product. In Paint's world it is erroneously known as "paint with food certificate" and in any case it is not just a test with a lot of sheets that nobody understand, but it is a manufacturer affidavit mandatory with date and legal signature in a format defined in EU 10/2011 and FDA 21 CFR 175.300, checked by Sanitary Authority and which must include:

- **The RGSEAA EU Sanitary Register with code 39** of the manufacturer, where all manufacturers of materials and objects in contact with food and beverages must be registered without exception. It is easy to check this point thanks to the RGSEAA searcher web of the Spanish Food Consumption and Nutrition Agency (AECOSAN).
- **As a sign of transparency, the last sanitary inspection date** must be included to demonstrate with certainty that the manufacturer is up-to-date, or was simply registered in the past, but does not have the current validation of the Sanitary Inspection. Registration does not change, norms are updated constantly.
- **No less important is the obligatory manufacture with good praxis (GMP)** in accordance to Regulation EC 2023/2006 and FDA, which implies that the manufacturer has adapted its manufacture to the food sector, and therefore; an HACCP is applied, its staff is trained in food-sanitary security, production is done in a clean room apart from the rest of products, under microbiological and pest control, etc. It means that the producer applies analogous safety rules, storage, control and traceability as the food producer.
- **To sum up, all the eligible external tests** (global & specific migrations, organoleptic, chemical physical and CE mark) must be detailed including date and test number. These tests are usually inspected by Sanitary Authority and should always be available to users who request for its verification.

CERTIFIED
CERTIFIED
CERTIFIED

CHECK

STOP

Declaration of Compliance

- ✓ EU Manufacturer's Sanitary Register RGSEAA code 39
- ✓ Manufacture according GMP (Good Manufacturing Practices) CE 2023/2006 - HACPP - 21 CFR 170.39
 - Framework Regulation for direct contact CE 1935/2004
 - EU Plastics Regulation EU 10/2011 and UE 2018/213
 - For America FDA 21 CFR 175.300
 - + Its yearly amendments with new restrictions
 - Formulation according EU & FDA positive lists.
 - If epoxy, in addition CE 1895/2005
 - Suitability for cleaning and disinfection CE 852/2004
- ✓ Global migrations and extractions tests that will determine for which food groups and in which conditions will have aptitude for direct contact:
 - EU Food Simulants (A, B, C, D, D2, E...) at temperature conditions (from OM1 to Om7)
 - FDA - Water, heptane, and ethanol extractions according food type (I-VIII) and final use conditions (A-H)
- ✓ EU specific migrations tests according product type
 - Primary amines and heavy metals (all)
 - Badge, Bisfenol A, Epichlorhydrin, Formaldehyde, Phenols, etc. (depending on paint-varnish type)
- ✓ Organoleptic tests (to avoid smell and taste variations)
- ✓ Others: CE marking tests, Declaration of Performance, physical-chemical resistance tests, classification for clean rooms DIN EN ISO 14644-1 or VDI 2083.

Manufacturer's data, date and legal signature.

FAKOLITH FoodGrade Technology makes the difference

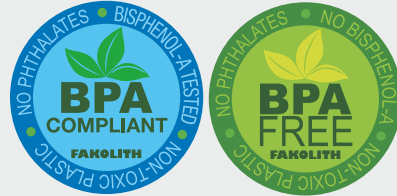
Because food safety is important to us, Fakolith has developed the FOODGRADE Technology range in official and private R&D&i projects, using only high pure and efficient raw materials of the positive list which are authorized according to current food standards, either in EU and FDA, avoiding toxic migrations. These paints and varnishes have been tested successfully in external reference laboratories. We have solutions for contact with all food and beverage groups.



High Added Value

BPA COMPLIANT - BPA FREE

We are ahead of the future. The u maximal BPA migration limit has been reduced according EU 2018/213. Fakolith only offers FoodGrade paints that fulfill BPA Regulations, and also other alternatives BPA free.



BIOFILMSTOP GREEN TECHNOLOGY

Our FoodGrade BFS Green paints are also treated (BPR Art.3) with the BioFilmStop Green technology, against Biofilm and pathogenic bacteria, *Salmonella*, *Listeria*, *Pseudomonas*, *Staphylococcus*, *Legionella*, etc., which increases even more food safety and hygiene.



FOODTECH TECHNOLOGY

With our technology based on alternative and safe preservatives, we have been able to develop for the first time a FoodGrade water-base paints range, a milestone in food contact products.



DOUBLE CERTIFICACION, FOR EU & FDA

Fakolith is leading the official research project "FDA & EU FoodGrade Coatings. We are the first company launching to the market varnishes and paints for direct contact, with double and simultaneously certification, accomplishing both international regulations, the American FDA 21 CFR 175.300 and European EU 10/2011.



DISPERLITH
FoodGrade
Elastic

Water-based varnish or paint, for renovation and painting of walls and ceilings, sandwich panel, objects, concrete tanks for drinking water. Clean Rooms Certified Paint.

DISPAINT
FoodGrade

Water-based enamel paint, for renovation and fine painting of walls and ceilings, and objects, utensils, shelves, wood, mainly on open surfaces under low to medium stress.

FK-45
FoodGrade

High performance epoxy paint and varnish, with high physical and chemical resistance, for tanks, silos, tanks, pavements, machinery, installations, pipes, baseboards, walls, ceilings, utensils ...

FK-45
FoodGrade
Hygienic

Special version of the high solids epoxy FK-45 with greater physical-chemical resistance, for tanks > of 10.000 l, pipes and multiple industrial applications of high performance.

FK-450
FoodGrade

High performance water epoxy paint with high chemical physical resistance, suitable for deposits, silos, tanks, pipes, machinery, installations, pipes, sockets, floors, walls...

FK-100
FoodGrade

High performance epoxy paint, 100% solids, for the inside of tanks which contains food, beverage and drinking water tanks, pipelines, facilities and multiple industrial applications.

FAKOPUR
FoodGrade

Topcoat 2 components acryl-poliurethane finishing paint, high U.V resistance, for the finishing mainly in outdoors of trailers, vehicles and agro-alimentary machinery, hoppers, feeders...

DISPERSOL
FoodGrade

Multi-purpose acrylic enamel paint, low-odor, for the renovation and finishing of open surfaces, walls, ceilings, sandwich panel, and objects of various materials existing in the agri-food industry.

VARNIPACK
FoodGrade

Acrylic water-based overprint varnish suitable for food packaging, inedible food shells, wooden surfaces, wine cooperage, objects, shelves,...

Check the progress of upcoming news at www.foodgradepaint.com

BIOFILM: The big problem of the Food Industry

The biggest risk in the food processing industry is BioFilm, which is made of a complex community of microorganisms covered with an extracellular polymer excreted by them. This matrix favors adhesion in all surfaces (plastic, glass, wood, metal, iron, stainless steel and food), allows their adaptation to the adverse environment, provides water and nutrients, protects them from disinfectants and let them grown, colonize and infect other surfaces. They are the cause of food contamination and can lead to product rejection, economic losses and an obvious risk for the health of consumers and workers who are in contaminated environments. We point out two phases:

- a) **REVERSIBLE:** When surface adhesion begins. In this phase they are sensitive to methods of cleaning, scrubbing and disinfection.
- b) **IRREVERSIBLE:** Adhesion becomes definitive and develops a huge resistance. It is required a previous destruction of the matrix and polysaccharides, and then a disinfection.

Biofilm causes serious problems and significant economic losses

1. Food Poisoning

Food poisonings are a group of diseases that happen as a result of the ingestion of contaminated foods, such as *Salmonella spp.*, *Listeria monocytogenes*, *Pseudomonas spp.*, *Campylobacter jejuni*, *Bacillus spp.*, *Staphylococcus aureus*, *Legionella spp.*, *Shigella*, *Streptococcus*, *Clostridium botulinum*, *Clostridium perfringens*, *Campylobacter*, *Bacillus cereus*, etc... Food poisoning develops from mild-moderate to extremely-severe diseases, and even fatal diseases.

2. Organoleptic variations

The disagreeable smells and tastes of mold, cork, stables, metallic tastes, abnormal coloration, decay... Defects such as these can result in a significant reduction in the quality of the product and in the image of the company, which can lead to rejection of a full batch, loss of prestige and important economic losses

The responsible micro-organisms can be divided into 3 types: Bacteria, molds and yeasts (*Aspergillus*, *Penicillium*, *Cladosporium*, *Brettanomyces*, *Candida*)... and in short also biofilm.

These microorganisms can get in through raw materials, utensils, inputs, environment of the food industry. Once inside, they do nests and colonize, and then they multiply on pavements, walls, ceilings, and other open surfaces. In a second phase, penetrate the processing areas. The microclimate on the food industry (humidity, poor ventilation, sufficient organic matter, adequate temperature) provides an enabling environment for microorganisms and its reproduction.

3. Industrial safety and related diseases

Molds and bacteria on surfaces and environment can be the silent cause of mycoses and industrial diseases, which can cause asthma, respiratory problems, eye and nose irritations, muscle pain, fatigue, allergies ... and even in immunosuppressed people, fungi's from *Aspergillus* family, can complicate moderate clinical pictures, turning them into fatal.



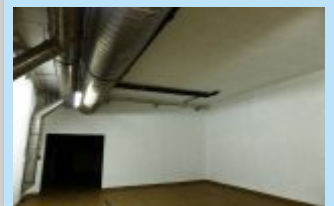
Problema



Origin; molds, biofilm



BioFilmStop solution



Technological Innovation BioFilmStop

BioFilmStop
FAKOLITH

Technology
Stop moho & bacterias

The open surfaces of the food plants represent more than 90% of the total surface area, and are vectors of potential contamination.

BioFilmStop is applied as paint in walls, ceilings, floors and other surfaces, turning these painted surfaces, into new active surfaces that inhibit contamination. The main advantages are:

- Active inhibition 24 hours a day, 365 days a year, and for years with maintenance.
- The biofilm, bacteria, mold and yeast inhibition is static, without realising biocides to the environment.
- Effective and safe in the presence of food and people.
- Applied in short time, in wide range of temperatures and even with high humidity. Low odour.
- Safer and healthier workplace environment, reducing the risk of job-related illnesses.

Cyclic oligodynamic combinations have allowed the synergistic compatibility between metallic nanotechnologic active ingredients, and organic, free and microencapsulated, as well as natural preservatives and photocatalytic pigments. Their combinations prevent from any resistance and improve its effectiveness for a long term.

All of this to treat high performance paints and surface treatments (BPR Art. 3) tested according to ISO 22196:2011 against pathogenic bacteria, such as *Salmonella enteritidis*, *Listeria monocytogenes*, *Staphylococcus aureus*, *Pseudomonas aureginosa*, *Legionella pneumophila*, *Escherichia Coli*. And also fungi and yeasts like *Aspergillus*, *Penicillium*, *Cladosporium*, *Brettanomyces*, *Candida*... and a large list of pathogenic microorganisms.



Fight the problem when it exists...
... and even prevent from its apparition



Our paint's main goal is to develop a functional and decorative painting film. But in addition, we also have provided them other features as low odor and VOC, physical and chemical resistance, to humidity, to cleaning and disinfection, with maximum ecology possible, durability and microbiological resistance with BioFilmStop Technology.



Paints and varnishes with BioFilmStop technology
against damp areas, biofilm, bacteria, mold....

**DISPERLITH
Hygienic**

Ecological paint with ECOLABEL European certificate, for the restoration and painting of walls and ceilings of common areas, offices, corridors, changing rooms, kitchens and areas of medium

**DISPERLITH
Industry**

Pure acrylic paint water dispersion paint, for renovation and painting of walls and ceilings in humid, productive areas, GMP-GLP., and contaminated areas with mold and microorganisms.

**DISPERLITH
Elastic**

Elastic, waterproof dispersion paint, drying at low T^a, for ceilings, walls, sandwich panels, lacquered metals in interiors-exterior, and many other applications. Certified for CLEAN ROOMS.

**RENOLITH
FK-32**

Dispersion paint with de-aromatized solvent, with excellent enamel finish, ideal for rapid renewal of multiple surfaces mainly in the food industry.

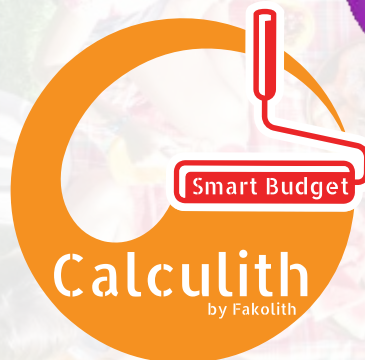
**DISPERLITH
POX**

Two-component water based epoxy paint, applicable in walls, baseboards and floors of medium stress, with drying even at low temperature, and excellent ease application.

**FK-45
Hygienic Forte**

High-solids epoxy paint-varnish, for situations in which a heavy duty coating of high physical-chemical stress is required, mainly in floors, baseboards, installations, objects,...

We Know How!



Surfaces you can trust

Fakolith Chemical Systems (FCS) is a Fakolith (FK) Group company, established in Spain. Our facilities in Tortosa count on a production plant and buffer warehouse, specialised technical services, a training centre and our own R&D&I Department.

Our experienced technical team, along with our network of official Distributors, will be delighted to provide you with complete information and assessment about our technologies, products and systems.

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www.foodgradepaint.com
www.pinturaalimentaria.es

