



**FAKOLITH**<sup>®</sup>  
chemical systems

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## Painting with certified hygienic paint in hospitals and operating rooms, as a barrier to prevent nosocomial infections or affected by humidity, mould, saltpetre, biofilm, bacteria, viruses.

### Description of the problem

If mold, fungi, bacteria, viruses and microorganisms must be solved and prevented anywhere, it is on the open surfaces of walls, ceilings, baseboards and floors, it is in hospitals, healthcare centers, clinics, operating rooms, etc. Undoubtedly, healthcare-acquired infections (nosocomial infections or HCAs) are a serious public health problem worldwide. We all know someone who went to a hospital with one health problem, and unfortunately acquired another, usually a new infection, while undergoing surgery or being treated for another illness. While there are extensive prevention protocols in place, a holistic system that adds up the more barriers the better is very much needed. Fakolith, with its range of hygienic paints treated with BioFilmStop antimicrobial technology, provides a high-value hygienic solution. Our range comprises sanitary hygienic paints suitable for every hospital area, with proven resistance to cleaning and disinfection, and treated with BioFilmStop (BPR Art3) anti-microbial treatment effective against fungi, biofilm and bacteria (including antibiotic-resistant MRSA bacteria) and viruses. While the priority is the solution of areas affected by moisture and microorganisms with our coatings, we must not forget that prevention is the best weapon against the causative agents of nosocomial infections. More general information in our special section for the healthcare sector.



### Summary of the most common basic solution and procedure

#### 1. SURFACE DISINFECTION AND CLEANING

· **BIOFILMSTOP Cleaner**: Application of the concentrated disinfectant and surface cleaner, with HA Sanitary Registry, to remove biofilm, bacteria, fungi, virus (suitable against coronavirus COVID-19), and other damages caused by humidity. To leave the base ready for a next treatment, proceed with a subsequent rinse with water.

#### 2. SURFACE PRIMER

· **DISPERLITH PRIMER**: Application of the nano primer with BioFilmStop Hygienic Technology with high resistance to humidity and microorganisms to consolidate the base and prevent the infection from regenerating from the inside. The base will be prepared for the adequate adhesion of the most suitable sanitary paint for each case.

**3. SURFACE PAINTING** : Final painting with 2 coats of the intelligent paint with BioFilmStop hygienic technology, suitable for use in hospitals and healthcare sectors, with high resistance to humidity, cleaning and disinfection, molds, biofilm, bacteria...

· **Option A - DISPERLITH ELASTIC**: marking tests, antimicrobial certification against fungi, bacteria and coronavirus,

as well as clean room certification. In areas with lesser requirements you can also use our ecological paint with Ecolabel seal [DISPERLITH Hygienic](#) .

• **Option B - FAKOLITH FK-45 FOODGRADE:** Especially on baseboards and high performance surfaces. This high solid epoxy version with CE marking tests paint is usually the most used option. Alternatively, can be applied [FK-100 FoodGrade](#) or [FK-45 FoodGrade Hygienic](#), both with higher physical-chemical resistance performance, or the water-based epoxy version [DISPERLITH POX](#) on those situations where the physical-chemical resistance requirements are lower.

## Application process

### 1.- BIOFILMSTOP Cleaner

IMPORTANT: BIOFILMSTOP CLEANER, has demonstrated efficacy according to EN 14476 against Adenovirus, Poliovirus and Murine Norovirus. All three are unwrapped viruses that are very difficult to inactivate by chemical disinfectants. Above all Poliovirus which is a very lipophilic virus and against which the quaternary ammoniums, on their own, are often not effective. Having passed this standard, it can be stated that BIOFILMSTOP Cleaner is totally virucidal according to the EN 14476 standard. THIS INCLUDES THE CORONAVIRUS SARS-COV-2 COVID-19.

**DESCRIPTION:** BIOFILMSTOP CLEANER is a concentrated water-based contact disinfectant with broad-spectrum antimicrobial, bactericidal, fungicidal and virucidal activity. It can be used by professionals indoors and outdoors. Concentrated water-based, chlorine and formaldehyde free, highly biodegradable. It acts destroying the protection system of viruses, bacteria, molds and yeasts, generating a deep disinfection.

**FIELDS OF USE:** Use authorized groups PT2 and PT4 as environmental and contact disinfectant, for surfaces, areas and equipment, vehicles, and also specifically in the food industry.

General use in the food industry, hospitals (not to be confused with the specific PT2 disinfectants for medical areas), industries, public and institutional areas, clinics, schools, homes, offices and buildings, residents' associations, shops and establishments, etc.

#### HEALTH RECORDS AND TESTS:

- Health Register 18-20/40/90-09472: Environmental use. Contact disinfection on surfaces and equipment.
- Health Register 18-20/40/90-09472-HA: Use in the food industry. For contact disinfection on surfaces and equipment.

BioFilmStop Cleaner is listed and recommended as an effective virucide against VOCs-19 by the Ministry of Health and the ECHA European Chemicals Agency.

It complies with the UNE-EN 13697 standard in clean conditions. Chemical antiseptics and disinfectants. Quantitative non-porous surface test to evaluate the bactericidal and fungicidal activity of chemical disinfectants used in food products, industry, the home and the community.

Complies with the UNE-EN 14476 Standard in clean conditions. Antiseptics and chemical disinfectants. Quantitative test of viricidal suspension of antiseptics and chemical disinfectants used in medicine.

Efficacy tests in accordance with tests carried out in external ISO 17025-accredited laboratories (included in the dossier of the Ministry of Health).

**MODE OF APPLICATION:** Application by immersion, manual washing with brushes, mops, or spraying and fogging, always with the product diluted in water:

- To ensure a viricidal function in all cases, apply the product to the surface at the maximum dilution of 1:19 in water (5% concentration), and leave it to act for at least 15-20 minutes (a concentration of 2%, i.e. 1:49 in water is

effective in many cases as indicated in the effectiveness tests below, but to avoid human failure, in critical situations such as COVID-19, we recommend using 5%).

- To ensure fungicidal activity, apply the product to the surface at a maximum dissolution of 1:32 in water (concentration 3%), and leave it to act for at least 15-20 minutes.
- To ensure a bactericidal activity apply the product on the surface at the maximum dissolution of 1:65 in water (concentration 1.5%), and let it act at least 5-10 minutes.
- For cleaning and disinfection before painting with Fakolith paints, use up to 1:8 solution in water (concentration 12.5%).

Once the mixture has been made, apply it preferably from the upper area with a brush, sponge, mop or spray, as appropriate in each case. Contribute to the removal of dirt and grease or food with a brush. After the application, brush and always respecting the contact times, rinse the surfaces with water.

In the case of application by fogging, access to the treated space should generally not be allowed until at least 3-4 hours after the end of the application. The actual time in each case will be determined by the equipment and method used, and must guarantee the complete precipitation of all the product sprayed on the surfaces.

Surfaces that will NOT be in contact with food or skin can be left to air dry without rinsing with water, or after the minimum time indicated, proceed to dry with disposable paper.

**SAFETY:** Always follow the instructions of the technical and safety data sheet before application. BIOFILMSTOP CLEANER in useable solution  $\leq 5\%$ , is not classified as hazardous or corrosive according to Regulation (EU) No 1272/2008, but the concentrate supplied it is. Both safety data sheets are available on our website, concentrated and solved form  $\leq 5\%$ .

**PERFORMANCE:** As a disinfectant its performance is very variable, depending on the solution used, type and absorption of the surface, method of application, so its performance can vary between 1300 m<sup>2</sup> and 400 m<sup>2</sup> per litre of concentrate on non-absorbent surfaces. As a cleaner-disinfectant on absorbent surfaces for renovation processes and painting with Fakolith food and sanitary paints approx. 15-20 m<sup>2</sup>/l. concentrate.

## 2.- DISPERLITH Primer

**PRODUCT SUMMARY:** DISPERLITH PRIMER is a water-based consolidating primer, with hybrid resins and quartz nano-spheres, ideal as a primer prior to painting with paints from the Disperlith range and dispersion paints in general.

Low Voc, fast drying, breathable and with high penetration in the base. Ideal for fixing, consolidating and bridging surfaces before painting. Can be applied on mineral bases, pladur®, bases painted with dispersion paints, mineral paints, sol-silicate, silicone resin and other paints and coatings that are deteriorated but well adhered to the base.

Highly moisture resistant primer, treated with BioFilmStop antimicrobial technology (BPR Art.3) effective against internal regeneration of bacteria, biofilm, moulds and yeasts.

**MODE OF APPLICATION:** Those bases that were affected by moisture and microorganisms should be pre-cleaned with the moisture damage cleaner FK-12.

After the cleaning has dried, the primer will be applied, without dilution, and according to the needs of each surface, 1 or 2 coats will be applied by brush, roller, spray or airless.

**CONSUMPTION - PERFORMANCE:** DISPERLITH PRIMER has a coverage of approximately 4-10 m<sup>2</sup>/l. Depending on the way of application, texture and absorption of the base coat it can vary considerably.

### 3.- OPTION A - DISPERLITH ELASTIC

**PRODUCT SUMMARY: DISPERLITH ELASTIC** is a waterproof and elastic hygienic-sanitary paint, widely certified, with high physicochemical resistance in its category, high resistance to humidity and its consequences. Formulated with modified acrylic copolymers in aqueous dispersion, low VOC, free of ammonia, APEO, formaldehyde, phthalates, BPA, heavy metals, polyhaloanisoles and polyhalophenols. Satin finish in interiors and exteriors, excellent coverage, waterproof, adhesion and elasticity, low odor, fast drying and from low temperatures (>3°C). On open surfaces, walls, ceilings and roofs, indoors and outdoors. Especially in the food industry and healthcare sectors, hospitals and clinics, and also in industry, civil engineering and public and private buildings in general. Available in white, NCS colors and colorless varnish. **With Declaration of Conformity, Performance and CE marking.**

**BIOFILMSTOP SANITARY TECHNOLOGY (Article treated BPR Art.3):** DISPERLITH Elastic is a treated paint (BPR Art 3 and 58) with broad spectrum BioFilmStop antimicrobial Technology. With **effectiveness ≥99.9%** and tested in various official R&D&I projects and external reference laboratories, under various regulations ASTM D2574-06, ISO 846, ISO 22196, ISO 15457:201, ISO 21702, etc., **against bacteria and biofilm** (Staphylococcus aureus MRSA, Listeria monocytogenes, Salmonella enteritidis, Salmonella enterica, Pseudomonas aureuginosa, Legionella pneumophila... ) **fungi and molds** (Aspergillus niger, Aspergillus brasiliensis, Candida albicans, Chaetomium globosum, Paecilomyces variotii, Penicillium pinophilum, Trichoderma virens...) **and viruses** (Human Coronavirus, Feline Coronavirus). The paints and coatings of Fakolith's sanitary range contribute to comply positively with CE 852/2004, are manufactured under HACCP and Good Manufacturing Practices (GMP) according to CE 2023/2006, improving hygiene and food and sanitary safety of surfaces and environments. FAKOLITH Sanitary Registration: RGSEAA ES-39.005259/T and ROESP E-0043-E.

**PROPERTIES:** Excellent adhesion on multiple surfaces, resistant to weathering, carbonation and alkalinity of the base). Drying starts from 3°C - 60% humidity. Tests CE marked (Tecnalia) UNE-DIN EN ISO 1504-2:2005 after 28 days cured at 23±2°C 50±5% relative humidity and average thickness of 285 µm.

- High resistance to attack by commonly used chemical solutions Class I-II.
- Permeability to CO<sub>2</sub> Class III Sd >50 m
- Permeability to water vapor Class I Sd <5m
- Liquid water permeability  $w < 0,1 \text{ Kg/m}^2\text{-h } 0,5$
- Tensile strength for Rigid and Flexible systems without traffic loads =1.30 N/mm<sup>2</sup>

According to DIN EN 13300:2002 and DIN EN 1062-1 it is resistant to wet rubbing Class 1 (<5 µm), covering Class 1 (>250 ml/m<sup>2</sup>) and Class 2 (250-125 ml/m<sup>2</sup>), water vapor transpiration Class V2 (SD= 0.66 [m]), and water permeability Class W3 (W24=0.0062). Estimated Euroclass B-s1, d0.

Paint treated with effectiveness tests against microorganisms (fungi, bacteria, yeasts) according to ISO 22196 and ISO 846 of Eurofins, CNTA and Fraunhofer, also tested as suitable for cleanrooms. Paint resistant to most disinfectants and cleaners according to Test DIN EN ISO 4628-2: 2004-01 carried out by TÜV SÜD Germany and/or Fakolith R&D&I. (In case of doubt, please consult our Technical Department). Paint/varnish tested with GC-MS-MS technique to determine the polyhaloanisoles and polyhalophenols profile in dry film, <0.50 ng/L. without risk of anisoles or precursors, suitable for use in wine cellars (DOLMAR).

**HOW TO APPLY:** Compatible with most absorbent mineral surfaces, concrete, properly primed metals, lacquered panels and other dispersion paints and/or previous primers well attached and resistant to cut-cross test Class 0-1 UNE-DIN EN ISO 2409:2007. For the proper application of a product, the state and preparation of the base must be considered. The base must be clean, consolidated and with adequate levels of humidity, for which we have a wide range of cleaners, disinfectants, deoxidizers, primers, water repellents, consolidators, insulating agents, mortars, putties. In case of doubt, consult our technical advice service.

**Finish with 2 or 3 coats** of Disperlith Elastic hygienic paint, applied by roller brush or airless.

**CONSUMPTION – PERFORMANCE:** Depending on the state and type of base, we recommend between 200-400ml/m<sup>2</sup>, applied in 2 to 3 coats, with a total yield between 2.5 and 5 m<sup>2</sup>/L.

More information in its technical and safety data sheet, and in the web section [solutions and application guides](#).

### 3.- OPTION B - FK-45 FoodGrade

**PRODUCT SUMMARY:** FK-45 FoodGrade is a 2-component heavy-duty epoxy food contact coating, 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 indications for each system, FK-45 FoodGrade is recommended for direct, indirect and occasional contact with food on open surfaces of walls, ceilings, skirting boards, floors, metal structures, machinery and equipment, cold and freezing rooms, food warehouses, panels, food transport, objects, etc., always indoors. In the food industry, health sectors, hospitals and clinics, industry, civil works, and public and private buildings in general. **Compatible with most consistent surfaces:** Tensile strength EN ISO 4624:2016 Rigid Systems:  $\geq 1,0$  (0,7) b N/mm<sup>2</sup>. (Without traffic loads) and:  $\geq 2,0$  (1,5) b N/mm<sup>2</sup> (With traffic loads). Surfaces with the adequate roughness  $Rz > 50$ , both in mineral bases, as well as in duly sandblasted (SA 2,5) or primed metals. Lacquered panels and previous compatible paints and/or primers, well bonded and resistant to the ISO 2409:2007- Class 0-1 cut-cross test.

**For the painting and interior renovation of food, beverage and drinking water tanks and pipes, use from now on the most modern, resistant and certified version "FK-100 FoodGrade", the only one that simultaneously complies with EU and FDA regulations.**

**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 Consult availability, price and minimum quantity of colors [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  $\mu\text{m}$  = wet 302 gr/m<sup>2</sup> (222 ml/m<sup>2</sup>) - yield 3,31 m<sup>2</sup>/kg (4,5 m<sup>2</sup>/L).
- Dry thickness 300  $\mu\text{m}$  = wet 453 gr/m<sup>2</sup> (333 ml/m<sup>2</sup>) - yield of 2,21 m<sup>2</sup>/kg (3,00 m<sup>2</sup>/L).
- Dry thickness 350  $\mu\text{m}$  = wet 528 gr/m<sup>2</sup> (389 ml/m<sup>2</sup>) - yield of 1,90 m<sup>2</sup>/kg (2,57 m<sup>2</sup>/L).
- Dry thickness 400  $\mu\text{m}$  = wet 604 gr/m<sup>2</sup> (444 ml/m<sup>2</sup>) - yield of 1,66 m<sup>2</sup>/kg (2,25 m<sup>2</sup>/L).

**AVERAGE YIELD TRANSPARENT VARNISH:**

- Dry thickness 50  $\mu\text{m}$  = wet 58 gr/m<sup>2</sup> (53 ml/m<sup>2</sup>) - yield of 17,27 m<sup>2</sup>/kg (18,87 m<sup>2</sup>/L).
- Dry thickness 75  $\mu\text{m}$  = wet 87 gr/m<sup>2</sup> (79 ml/m<sup>2</sup>) - yield of 11,49 m<sup>2</sup>/kg (12,66 m<sup>2</sup>/L).
- Dry thickness 100  $\mu\text{m}$  = wet 116 gr/m<sup>2</sup> (105 ml/m<sup>2</sup>) - yield of 8,63 m<sup>2</sup>/kg (9,52 m<sup>2</sup>/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.