Type of material

FAKOPUR FOODGRADE is a solvent-based, highly resilient, 2-component polyurethane coating for interior and exterior use. The coating is tested for direct contact with food according to the requirements of VO (EC) 1935/2004, VO (EU) 10/2011, VO (EU) 1282/2011, VO (EU) 2016/1416, VO (EC) 2023/2006, VO (EU) 2017/752, VO (EU) 2018/213.

FAKOPUR FOODGRADE has a satin finish, contains aliphatic diisocyanates as hardeners and is proven to be free of APEO, ammonia, bisphenol-A, formaldehyde and heavy metals. GREEN-BIO.FILM.STOP technology protects the ink film from microbial attack (bacteria / viruses).

FAKOPUR FOODGRADE is the first tested 2K polyurethane coating that complies with the European Regulation VO (EU) 10/2011 for direct contact with all foodstuffs.

Properties

FOODGRADE

BioFilmStop Technology

Cleanroom® Suitable Materials
FAKOLITH Farben GmbH Report No. FA 2107-1241
FAKOPUR FOODGRADE Chemical Resistance: good

Recommended by the Federal Association of the food inspectors Germany e.V.

CE

- Certified according to VO (EU) 1935/2004, VO (EU) 10/2011 for direct contact with foodstuffs
- Surface protection against virus and bacteria infestation by tested GREEN-BIO.FILM.STOP technology (ISO 21702:2019-05, ISO 22196:2011-08)
- Certified cleanroom paint. Tested by IPA Fraunhofer Institute, chemical resistance according to ISO 2812-1; ISO 4628-1, VDI 2083 Part 17).
- Recommended by the Federal Association of Food Inspectors of Germany e.V.
- Highly durable surface with good resistance to cleaning agents commonly used in the industry.
- For indoor and outdoor use. Excellent weather resistance.
- Fast drying
- Odor-intensive during processing and drying. Due to the very fast drying of the ink film, the odors from the solvents do not represent a further nuisance after only a few hours, provided there is good ventilation.
- High abrasion resistance: UNE EN ISO 5470-1:1999
- Water impermeable. FAKOPUR FOODGRADE forms a water-impermeable film after drying, which is easy to clean.
- Full CE marking and testing according to UNE-EN 1504-2:2005
- No water absorption/non-swellable (avoidance of microbial infestation)

In combination with the system primers DISPERLITH PRIMER and FAKOLITH FK 16 Deep Penetrating Primer, FAKOPUR FOODGRADE is suitable for coating mineral substrates, metals as well as intact old coatings (e.g. epoxy resin coatings, emulsion paints). Sample application with positive cross-cut test of category 0-1 UNE DIN EN ISO 2409:2007 is expressly recommended.

GREEN-BIO.FILM.STOP technology
The selected combination of active ingredient substances creates a color film with high qualitative and quantitative resistance to viruses and bacteria. The tests were performed in application of ISO 21702:2019-05 (Measurement of antiviral activity on plastics - Feline coronavirus, Strain Munich) and ISO 22196:2011-08 (Measurement of antibacterial activity on plastics - Escherichia coli, Listeria monocytogenes, Bacillus subtillis, Pseudonomas aeruginosa). BIO.FILM.STOP

technology has a preventive effect in the reversible phase. The formation of a biofilm on the surface of the coating is demonstrably inhibited by BIOFILMSTOP prophylaxis.

Areas of application

FAKOPUR FOODGRADE is especially recommended for coatings of outdoor food basins and containers.

But also for transport elements, agricultural tools and equipment, feed cribs in animal husbandry, tub and transport containers (e.g. for potatoes, beets, grapes), which are in short or long-term direct contact with food.

The 2K polyurethane coating offers an alternative to epoxy resin FOODGRADE coatings, which cannot be used here, especially in well-ventilated outdoor areas. FAKOPUR FOODGRADE can be used as a certified FOODGRADE coating can also be used as a finishing coat over a 2K epoxy resin system.

Legal provisions and certification

FAKOPUR FOODGRADE complies with all current European regulations for materials that come into contact with foodstuffs in accordance with VO (EC) 852/2004.

Regulations for the certification of FAKOPUR: Regulation (EC) 1935/2004, Regulation (EC) 2023/2006, Commission Regulation (EU) 10/2011 and the amendments (EC) No. 1282/2011 relating to plastic materials and articles in contact with food. With the implementation of the European regulations, criteria for the European market are standardized. Among other things, the standards define various simulants as well as global and specific migration tests for each food group. The previous tests for FAKOPUR FOODGRADE were carried out with simulants A, B, C (OM2-40°C) and D2. All details of the tests performed are included in the manufacturer's declaration of conformity.

The tests carried out by FAKOLITH Chemical Systems in the independent institutes APPLUS, TECNALIA and the National Institute of Food Technology (CNTA) confirm that the FAKOPUR FOODGRADE coating meets the requirements for global and specific migration limits in all test procedures.

HACCP

FAKOLITH Chemical Systems is an associate member of CNTA and a participating partner in official R&D projects related to technically advanced coatings for the food industry and the healthcare sector.

FAKOLITH Chemical Systems is registered both in the Health Registry of the Food Industry of the Spanish Province of Catalonia (Registro Sanitario de Industrias y Productos Alimenticios de Cataluña, RSIPAC) under the number 39.05377/CAT and in the Spanish Health Registry of the Food Industry (Registro General Sanitario de Empresas Alimentarias y Alimentos, RGSEAA) under the number ES-39.005259/T. FAKOLITH Chemical Systems guarantees the production of products of impeccable quality as part of the implementation of the company's internal HACCP concept. According to VO (EU) 1935/2004/EG the traceability of the production is guaranteed.

Substrates

Substrate preparation in accordance with the German Construction Contract Guidelines (VOB). Substrates must be dry and free from contamination and separating substances. Observe German Construction Contract Guidelines (VOB), Section C, DIN 18363, part 3. The Substrate pre-treatment depends on the substrate:

- **Concrete:**
  Remove release agent residues with FAKOLITH FK 11 Cleaner, if necessary. Remove sanding substances. Pretreat chalking substrates with DISPERLITH PRIMER. On non-chalking substrates apply FAKOPUR FOODGRADE directly with approx. 2% thinner in the first coat.

- **Mineral substrates:**
  Check the strength and absorbency of the substrate. Prime highly to moderately absorbent or chalking substrates with DISPERLITH PRIMER. Otherwise apply FAKOPUR FOODGRADE directly onto the mineral substrate.

- **Sheetrock / Aquapanels:**
  Prime with DISPERLITH PRIMER or FAKOLITH FK 16 Deep Primer.

- **2K epoxy coatings:**
  A sample laying is always required. Clean and sand the surface (>100 grit sandpaper). Direct coating with FAKOPUR FOODGRADE.

- **Substrates made of plastic / GRP:**
  A sample laying is always required. Clean and sand the surface. If necessary, direct coating with FAKOPUR FOODGRADE.

- **Mold and bacteria infested substrates:**
  Clean with FAKOLITH FK 12 diluted 1:4 with water. Then prime with DISPERLITH PRIMER.

- **Yeast and bacteria infested substrates:**
  Clean with FAKOLITH FK 39. Then prime with DISPERLITH PRIMER.

- Substrates with **soiling due to grease, oil, soot:**
  Clean with FAKOLITH FK 11 diluted 1:20 with water.

- **Coatings that are not load-bearing:**
  Remove and clean substrate. Prime with DISPERLITH PRIMER.

- **Load-bearing emulsion paints:**
  Clean substrate. It is essential to check the strength and suitability of the old coating(s) by laying samples. Direct coating with FAKOPUR FOODGRADE.

- **Wood:** Sand, thoroughly clean off residues, apply FAKOPUR FOODGRADE undiluted. A sample application is absolutely necessary due to the different wood types/surfaces.

- **Tiles:**
  Sample laying required. Clean the tiles and sand them. Remove dust, repair joints if necessary. Apply a thin overlapping coat of FAKOPUR FOODGRADE + 2% SOLPUR FOODGRADE Thinner to highly absorbent joints. After drying (min. 24h) coat at least 2x with FAKOPUR FOODGRADE.

- **Vessel coatings:**
  Subsequently apply FAKOPUR FOODGRADE with 150-200µm total layer thickness (dry) in several work steps. This type of coating should only be applied by specialized companies.

Please read the technical information and safety data sheets before application. Observe substrate moisture, check the strength of the old coatings by means of cross-cutting and clarify the spatial/temporal conditions on the object.

Carrying out renovation and maintenance work in industrially used spaces requires sound planning. We recommend inquiring about the individual requirements for the coating and clarifying the conditions on site before starting the work:

- Which cleaning agents are used in which concentration, at which temperature and how often during the daily production process?

- What are the temperatures/humidity during the execution of the renovation works?

We recommend detailed coordination of the work, taking into account the processing conditions and the expected drying times. When will production start up again? What moisture load is to be expected and when will the first cleaning of the renovated section take place?

Processing

FAKOPUR FOODGRADE contains diisocyanates: According to ChemVerbV, adequate training must be provided prior to industrial or commercial use as of August 24, 2023.

Application: The substrate must be clean, dry and load-bearing. The room and substrate temperature must not fall below +5°C and not exceed +30°C during application and drying. The surface temperature of the substrate to be coated should always be 3°C above the dew point. Maximum relative humidity during application: 60%.

Mixing: Stir component A and B separately. Subsequently, slowly stir component B into component A. Stir manually or at lowest speed for approx. 2-3 minutes and add the required amount of SOLPUR FOODGRADE diluent (max. 5%). Then let the mixture rest for 2 minutes.

Dilution: The viscosity of the 2K polyurethane coating varies, depending on the storage and ambient temperatures. Low temperatures increase, high temperatures decrease the viscosity. Accordingly, we recommend adjusting the product on site with SOLPUR FOODGRADE thinner.

Important: Transfer the mixture into a clean bucket for processing. Any residues of component A from the binder can lead to filming problems. Only mix the amount of material that can be processed within the pot life (see pot life).

Manual application: Apply with short-floor roller (<= 5mm) or brush. Application in at least 2 layers. The use of special paint rollers for solventborne 2K polyurethane coatings is strongly recommended. Wash out and dry roller well before application.

Airless spraying:
Optimum spraying results were achieved with the SF23 Pro airless unit with Tempspray from Wagner. Nozzle: Trade Tip 3, spray pressure 200 bar, spray temperature FAKOPUR FOODGRADE = 60°C. Gun = Vector Grip, gun filter red, undiluted.

With a polyurethane coating, CO_2 may be released during drying. To avoid the formation of bubbles and craters in the paint film, it is important to apply thin coats of paint.

FAKOPUR FOODGRADE contains a fast drying, flammable FOODGRADE solvent with an intense odor. It is not recommended to continue food production while performing painting and drying. In case of indoor application, good artificial ventilation (air extraction) must be installed during the application and drying time.

The solvents of FAKOPUR FOODGRADE are fast-volatile. After only 24 hours, the applied coating is almost odorless.

Pot life

A + B (5 L)	10° C	20° C	30° C
Usability of the mixture	4 h	2 h	1 h

Binder

Acrylic resin crosslinking with polydiisocyanates

VOC content

Category: j (BD)
Not more than 500 g/l VOC (Directive 2004/42/CE-2010)
The product contains less than 500 g/l VOC

Solvent content	70% ± 3%
Pigmentation	Titanium dioxide
Specific weight	Mixture (component A+B): 1l = 1.35 kg Component A: 1L = 1.38 kg Component B: 1L = 1.06 kg Mixing ratio: 11,5:1 By weight: 1 kg A : 0.067 kg B By volume: 1 L A : 0.087 L B
Viscosity	Dynamic viscosity (ASTM 3, 250 rpm, a 25 º c ± 0.5): 2500 ± 500 MPa - s Static viscosity (ASTM 3, 20 rpm, a 25 º c ± 0.5): 2000 ± 1,000 MPa - s
Solid materials	50% ± 5%
Gloss level	Medium silk gloss (gloss level 55± 5)
Opacity (UNE-EN 13300)	Dry film thickness 300 µm = Class 1
P.V.C.	40% ± 2% (pigment volumetric concentration)
Colour shades	White, gray RAL 7004.
Consumption	Film thickness and theoretical yield of FAKOPUR FOODGRADE: The following table serves as a guide to dry film thicknesses and consumption quantities:

FAKOPUR FOODGRADE (7 days- 23ºC - 50% relative humidity)			
Application thickness	Coating thickness - Consumption		Theoretical yield*
	dry	wet	
fine	50 µm	100 ml/m² ± 2% (100µm/226,5g/m²))	10 m²/l
medium	100 µm	200 ml/m² ± 2% (200µm/453g/m²))	5 m²/l
high	150 µm	300 ml/m² ± 2% (350µm/528g/m²)	3,3 m²/l

Material consumption depends on the type of application, environmental conditions, shape and nature of the substrate, as well as technical requirements for the surface. Application in 2-4 layers, depending on the type of application.

The average dry film thickness per pass when applying FAKOPUR FOODGRADE with the microfiber roller is approx. 40µm (80µm wet), but can vary significantly depending on the nature of the substrate.

The recommended dry film thickness per pass when applying FAKOPUR FOODGRADE by spray application is approx. 75µm (150µm wet).

For coating containers, silos and highly loaded surfaces, it is always recommended to apply thin coats, as indicated in the guideline, with a total dry film thickness of 150-200µm (~300-400ml/m²).

Dilution	FAKOPUR FOODGRADE is basically ready to use, but can be diluted with approx. 5% SOLPUR FOODGRADE Thinner for object-related optimization.
Drying time	

Relative drying times		
50 µm dry -111 µm wet	10ºC (50% relative humidity)	25ºC (50% relative humidity)
Grip resistant according to	15-30 min	5-15 min
Can be painted over with FAKOPUR FOODGRADE	2-4 h	1-3 h
Dried through and loadable Standard coating Vessel coating	>96h >10 days	72h > 7days

The ambient temperature, humidity, air circulation and coating application thickness determine the final drying time. Examples of the influence of temperature and humidity on the open time of the coating:

Open time (100 µm) at 25°C, 30% relative humidity = 10 min

Open time (100 µm) at 5°C, 60% relative humidity = 15 min

Drying and artificial ventilation	Depending on the layer thickness, ventilation and temperature in the containerst, the coating is completely dry in approx. 8-14 days. At lower temperatures and/or higher humidity and high film thicknesses, the curing times will be longer. Good artificial ventilation (air extraction) must be maintained both during application and curing. Before filling a container coated with FAKOPUR FOODGRADE, make sure that the paint film is completely cured and the container has been washed out with clear water. The curing time can be reduced by special aeration and deaeration equipment. Other applications: During the first 72 hours, the paint should not be subjected to intensive mechanical stress and cleaning operations in order to achieve optimum filming and adhesion.
Application temperature	Minimum processing temperature +5ºC (50-60% relative humidity) for substrate and object.
Test criteria	VO (EC) 1935/2004, VO(EC) 10/2011, VO (EC) 2023/2006, VO (EU) 1282/2011, VO (EU) 2016/1416, VO EU) 2017/752, VO (EU) 2018/213
Declaration of Conformity	Please request the declaration of conformity from the factory. For reasons of traceability and quality assurance, the quantity delivered and the intended use are recorded in the declaration of conformity. Please specify when ordering the declaration of conformity.
Storage	Up to 18 months from date of bottling in original, well-sealed packaging.
Container	Metal container of 5-L (A + B).
Occupational safety	Exclusive product for professional use. For proper handling, read the safety data sheet, use your personal protective equipment and take the necessary measures.

Disposal	For disposal, the local official regulations must be observed. Liquid materials must be given special treatment in compliance with the official regulations.
Note	A successful renovation requires professional planning and detailed documentation. For this purpose, we offer you the "FAKOLITH Checklists" as well as object-related "Renovation Concepts". The documents are available on the Internet at www.fakolith.de. Our application technology department will be happy to provide you with personal advice.
Information according to Regulation (EU) 2020/1149 on the restriction of diisocyanates	FAKOPUR FOODGRADE contains diisocyanates in a concentration of >0.1%. FAKOPUR FOODGRADE is intended exclusively for use by professional processors. From 24.08.2023, the following regulations will apply to the sale and use of products containing diisocyanates in accordance with the Chemicals Prohibition Ordinance: Resellers - proof of expertise required at the time of purchase. Processing by professional users - training obligation. The manufacturers' association ISOPA/ALIPA has prepared training and test materials for online training for professional users in all language versions. These are available at www.safediisocyanates.eu.
Safety Datasheet	Please follow the instructions in the safety datasheets.

Technical information 30.10.2025