2-component epoxy resin rust protection primer and adhesion promoter

Type of material

Waterborne 2K epoxy primer, with zinc phosphate and organic anticorrosives. Fast drying, low VOC, low odour.

Properties

- Primer for surfaces made of iron, steel, stainless steel, galvanized metals, copper and aluminium.
- Suitable for already coated metal plates and/or compatible primers. Prerequisite: Cross-cut test class 0-1, UNE-DIN EN ISO 2409:2007 and sample laying.
- Particularly recommended as a 2-component rust protection primer for the final coating with FK 45 FOODGRADE, FK 100 FOODGRADE, FAKOPUR FOODGRADE, DISPERLITH FOODGRADE and DISPERLITH ELASTIC.
- Tested in the system with the final coatings FK 45 FOODGRADE, FK 100 FOODGRADE and FAKOPUR FOODGRADE as primer for direct contact with foodstuffs according to VO (EU) 10/2011.
- Excellent anti-corrosive properties.

Areas of application

Rust inhibitor and adhesion promoter on surfaces made of iron, steel, stainless steel, galvanized metals, copper and aluminium. Particularly suitable for as a primer for subsequent coating with the FAKOLITH FOODGRADE and HYGIENE COATINGS.

Substrates

Direct adhesion (FK 44 POX): 80 µm dry

Surface	**Adhesion (UNE-EN ISO 4624-2002) (kg/cm²)**	**Adhesion (Cross cutting method - UNE-EN ISO 2409:2007)**
Carbon Iron	140 ± 10 kg/cm² (RCI)	Class 0
Steel	46 ± 5 kg/cm² (RCI)	Class 0
Copper	46 ± 5 kg/cm² (RCI)	Class 1
Aluminium	28 ± 5 kg/cm²(RCI)	Class 0
Galvanized metals	42 ± 5 kg/cm²(RCI)	Class 0

Adhesive system (FK 44 POX + FK 45): 80 µm dry + 150 µm dry

Surface	**Adhesion (UNE-EN ISO 4624-2002) (kg/cm²)**	**Adhesion (Cross cutting method - UNE-EN ISO 2409:2007)**
Carbon Iron	190 ± 10 kg/cm²(RCI)	Class 0
Steel	54 ± 5 kg/cm² (RCI)	Class 0
Copper	56 ± 5 kg/cm² (RCI)	Class 0
Aluminium	26 ± 5 kg/cm²(RCI)	Class 0
Galvanized metals	61 ± 5 kg/cm²(RCI)	Class 0

RCI = Cohesive failure of the primer. RA = Adhesion failure of the primer.

The values for adhesion strength and cross-cut test are guide values. The results may vary in practical application depending on the condition of the substrate, substrate pre-treatment and application. The recommended minimum layer thickness and drying time must be observed and the transferability of the above-mentioned measured values on the object must be confirmed by laying samples.

Substrate preparation

General preparation of the metal surface:
Prepare surface with a suitable method and remove residues of oil, grease, salt or dirt (ISO12944-4). Recommendation: Apply FAKOLITH FK 11 cleaner, diluted 1:20 with water, and clean off immediately. Wipe with solvent to prevent corrosion.

Information on surface preparation methods can be found in DIN EN ISO 12944-4 and our leaflet "Surface preparation of steel components".

Oxidized surfaces: Remove rust. Coat with FAKOLITH FK 9, allow to react for 10 minutes and wash off again. Allow substrate to dry for 1 hour and wipe with solvent (e.g. Universal Thinner). Then recoat with FAKOLITH FK 44-POX for a short time.

Primed and already coated surfaces: FAKOLITH FK 44-POX shows excellent adhesion on various tested primers, old coatings and powder-coated substrates. Nevertheless, we recommend testing the adhesion of FAKOLITH FK 44-POX by laying a sample.

To guarantee optimal adhesion, especially in technical applications such as machine and silo painting, please completely remove paint residues, dirt, grease, corrosion and work out an appropriate roughness by means of a treatment suitable for the type of metal to be worked on (ISO12944-4).

Conditions for application: The surface to be painted must be dry and free from grease and dust. Application temperature min. +4°C, max. relative humidity 70%. The temperature of the steel surface should be at least 3°C above the dew point.

Pot life

A + B (2L, 5L)	10ºC	20ºC	30ºC
Processability of the mixture	3 h	2 h	1 h

A + B (12,5L)	10ºC	20ºC	30ºC
Processability of the mixture	3 h	2 h	1 h

Mixing ratio

By volume = 1.22 litres A : 1 litre B
By weight = 1,65 kg A : 1 kg B

Processing

The substrate must be clean, dry and free from grease and oil deposits. Stir undiluted components A and B well. Stir component B into component A. Transfer to another container for application to prevent component A residues from being absorbed by the container rim. Clean tools with water.

Application by brush or airless spraying. Application by spraying should be well planned due to the short pot life.

Optimum spraying results were achieved with the Airless unit SF23 Plus from Wagner using the AirCoat process. Nozzle 9/40 flat jet, spray pressure 200bar. AirCoat data: Gun AC 4600, air cap blue, gun filter red, air pressure 2.5 bar, temperature AirCoat: 20°C. Spray application undiluted.

VOC content

Category: j (Wb)
Maximum 140 g/l VOC (Directive 2004/42/EC, 2010).
The product contains less than 30 g/l VOC.

Density at 25°C

Density A: 1,39 ± 0,02 kg/l
Density B: 1.03 ± 0.02 kg/l
Density mixture: 1.23 ± 0.02 kg/l

Flash point

Not applicable

Gloss level

Matt

Colour shade	Light grey (RAL 7035)
Tinting	Not foreseen
Consumption	**Recommended minimum layer thickness and theoretical yield:**

Layer thickness - Consumption			Theoretical yield
Dry film thickness	wet	wet (ml-g/m²)	
40 µm (low)	125 µm	125 ml ≈ 150 g/m ²	approx. 8 m²/l
80 µm (medium)	250 µm	250 ml ≈ 300 g/m ²	approx. 4 m²/l
160 µm (high)	500 µm	500 ml ≈ 600 g/m ²	approx. 2 m²/l

The above mentioned layer thicknesses are to be applied in 1-4 working steps. A low layer thickness is sufficient for an adhesive primer. For adequate corrosion protection, however, we recommend a medium to high layer thickness, especially in damp areas. Coating thickness per application: Manual = approx. 150 g/m². Machine = approx. 300 g/m².

Dilution	Water. FK 44-POX is ready for use and should be applied undiluted.
Drying time	

Relative drying times:			
125 µm wet film- 40 µm dry (relative humidity 60-70%)	+ 5º C	+ 20º C	+ 30º C
Dry to the touch and paintable with FK 44 POX	45 min	30 min	15 min
Dried through and paintable with final coat	12-24 h	8-12 h	4-6 h

Drying time and recoatability depend on film thickness, ventilation, temperature and relative humidity.

Application temperature	From +4°C
Compatibility	Do not mix with other products.
Storage	Up to 24 months from the date of manufacture, in the original container, well closed and protected from frost. It is recommended to store the product at a temperature of 15°C to 25°C. Crystalline deposits in component A caused by cold temperatures can be dissolved by heating the material to approx. 23°C. This process does not affect the quality of the product. This process does not affect the quality of the product.
Final coating	**Tested paints for the final coat on metal with:** FAKOLITH FK 45, FK 100 FOODGRADE, FAKOPUR FOODGRADE, DISPERLITH FOODGRADE, DISPERLITH ELASTIC. Adhesion of other products must be confirmed by laying a sample.
P.V.C.	35% ± 2%
Solid materials	49 ± 2 % (ISO 3233)
Container	Set of A+B of 2.5 litres (A = 1.35l / B = 1.15l) Set of A+B of 5 litres (A = 2,70l / B 2,30l) Set of A+B of 12.5 litres (A = 6.75l/ B = 5.75l) Please observe the mixing ratios. Mixing of complete sets is recommended to avoid mixing ratio errors.
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. Keep out of the reach of children. Do not allow residues to enter drains/waterways or soil.
Disposal	Dispose of contents in accordance with local government regulations.
Note	Basically, attention should be paid to the pre-treatment of the substrates. For this purpose, FAKOLITH FK 11 Grease Cleaner, FAKOLITH FK 12 Mould, Algae and Green Film Cleaner and FAKOLITH FK 14 Anti-Fungal Substrate Remover are available.
Safety datasheet	Component A Component B

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