BEECK Corrosion Protection Primer

Corrosion protection primer for ferrous metals and steel, interior and exterior

1. Product Properties

Opaque primer coating for bright iron and steel in interior and exterior areas. Suitable, for example, for steel beams, hardware and grating. Has a passivating and corrosion inhibiting effect on the metal substrate. Not suitable for zinc coated sheet steel, anodic coatings and non-ferrous metals. Intermediate coat with BEECK Undercoat, white matt. Topcoat with BEECK Exterior Stand Oil Paint for outdoor use or BEECK Interior Stand Oil Paint for indoor use. BEECK Corrosion Protection Primer contains vegetable oils, which absorb oxygen on drying and interlink to form a hard elastic and water-repellent film. Does not tend to flake off, even under intense weathering. Active mineral, micaceous iron oxide-based pigments have a passivating effect on the metal surface and reduce the tendency to rust. The firmly adherent primer prevents the access of water and corrosion stimulators dissolved in it, e.g. air pollutants and salts.

1.1. Composition

- Classic high solid metal primer made from siccative refined linseed oil, vegetable stand oils and tree resins
- Dissolved in readily penetrating essential oils and aromatic compound-free solvents
- Passivating micaceous iron oxide pigmentation
- Free from toxic heavy metals, e.g. chrome(VI) or lead-based
- Free from synthetic resins, plasticisers, biocides and preservatives

1.2. Technical properties

1.2.1. Overview

- For use on interior and exterior surfaces
- Highly adherent on steel and ferrous metals
- Lastingly passivates and inhibits the tendency to corrode
- Low tension, does not tend to flake off
- Can be coated over practically an unlimited number of times
- High yielding, easy-to-use high solid metal primer
- Traditional formulas suitable for listed buildings
- Not suitable for zinc coated sheet steel and non-ferrous metals

1.2.2. Important building physics characteristics

Parameter	*Value*	*Conformity*
Density $_{20°C}$:	1.40 kg / L	
Viscosity: approx.	140 s (3 mm flow cup)	ISO 2431
s_d value (H_2O):	> 1 m	
Gloss level at 85°:	matt	EN ISO 2813
Flash point:	> 61°C	
VOC content (max.):	300 g / L	ChemVOCFarbV Cat. A / d
Solids content: approx.	80 % (high solid)	

1.2.3. Colour

- Dark grey-brown. Further treatment with BEECK Undercoat, White

2. Use

2.1. Substrate requirements

- BEECK Corrosion Protection Primer is suitable for corrosivity categories C1 – C3 to EN ISO 12944-2. Steel coatings generally require intensive maintenance in aggressive climates, for example, in swimming pools, if exposed to road or deicing salt and in marine and industrial atmospheres.
- The metallic substrate must be clean, dry, firm and stable and must be free from efflorescent, discolouring, adhesion impairing and/or drying-delaying substances.
- Substrates must be bright, i.e. thoroughly derust (cleanliness Sa 2.5 to EN ISO 12944-4 / DIN 55928).
- Only for use on ferrous metals and steel, not for zinced sheet steel, anodic coatings and non-ferrous metals.

2.2. Brief information on the standard system

- Derust, clean and degrease ferrous metals.
- Apply BEECK Corrosion Protection Primer, 1 – 2 coats depending on requirement.
- Intermediate coat with BEECK Undercoat. Topcoats with BEECK Exterior Stand Oil Paint or BEECK Interior Stand Oil Paint.

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2.3. Substrate and preparatory treatment

- ***Ferrous metals:***
  Use BEECK Corrosion Protection Primer only on bright steel. Derust corroded surfaces thoroughly and pore-deep by grinding or blast cleaning (cleanliness Sa 2.5 to EN ISO 12944-4 / DIN 55928). Wash off release agents, oily and greasy contaminations thoroughly using BEECK Lacquer Thinner, and rinse with clean lacquer thinner. Carefully remove dust from freshly derusted surfaces, where possible using oil-free compressed air. Protect from film rust and prime on the same day.
  Lightly grind the surface of new sheet steel for improved adhesion. Remove rolling grease pore deep with BEECK Lacquer Thinner as described above. Completely remove less adherent, flaking old coatings by grinding, stripping or blast cleaning.
  Lightly grind and clean the surface of firmly adhering, firm old oil or alkyd resin-based coatings. If necessary, only derust corroded areas and make good locally with BEECK Corrosion Protection Primer. Then apply a uniform intermediate coat of BEECK Undercoat to the whole surface.
- ***Unsuitable substrates*** are hot-dip galvanised and zinc-plated steel, aluminium, anodic coatings and non-ferrous metals such as copper and brass. Use metal primers suitable for zinced steel and non-ferrous metals, e.g. self-etching zinc primers, and ensure they can be coated over with BEECK Stand Oil Paints by trying out on a test area. Risk of zinc soap formation and spalling, especially on exteriors, therefore an oil-free coating system is advisable here. Structural members and components that are continuously in contact with soil or water, horizontal and exposed to the weather and/or mechanically stressed are also unsuitable.
- ***Defective substrates*** require a differentiated approach, examine and try out on a test area first.

2.4. Application instructions

2.4.1. General information

Check substrate suitability as described in the EN ISO 12944-2 (see 2.1 and 2.3). Pay particular attention to the metal type, surface finish and tendency to corrode of the respective substrate. Try out on a test area before using on high quality and critical surfaces. Ensure that the product is used by qualified persons.

- Carefully cover surfaces which are not to be treated – especially glass, window sills, expansion joints, lacquer, plastics and hardware – and protect them from splashes.
- Provide personal protective equipment.
- Before use, carefully stir BEECK Corrosion Protection Primer to the bottom of the container: Micaceous iron oxide pigments tend to settle.
- Do not use in wet conditions, if there is a risk of frost, on hot surfaces or in the blazing sun.
- Minimum application temperature: +8°C. Ensure ventilation and heat (room ambient temperature), handle fresh coatings carefully. Drying time per coat: in normal climate is ready to coat over after at least 24 hours. Protect fresh exterior coatings from the rain; hang up scaffolding sheeting in front of the surface worked on.

2.4.2. Use in the system

Apply BEECK Corrosion Protection Primer with a round brush, flat brush, painting roller or a spraying method (low-pressure, high-pressure, air-mix).

- Apply thin coats, smoothly, seamlessly and uniformly.
- Avoid excessive coat thicknesses, spread out well including on rough substrates.
- If necessary, thin with up to 3 % BEECK Lacquer Thinner, especially on porous and rough substrates and if using a spray coating method.
- 1 – 2 coats as required, e.g. on textured or large-pored substrates. Ensure good edge cover.
- Leave for at least 24 hours before painting over. In case of dust inclusions and a long time before the following coat (> 1 week), finely grind the surface first before coating.
- Also avoid excessive coat thicknesses if using spray coating method; carefully spread excess material on the surface with a brush. Do not allow any “lakes” fat edges or runs and sags to dry on the surface, especially on horizontal surfaces and in recesses. A sample application is advisable.
- Note the risk of auto-ignition in extractor filter mats in case of oily overspray.

3. Application Rate and Container Sizes

The application rate, i.e. the quantity required for smooth, sheet steel is approx. 0.08 L BEECK Corrosion Protection Primer per m² and pass. Determine additional application rate on profiled and rough substrates by trying out on a sample area.
Container sizes: 0.25 L / 0.75 L / 3 L

4. Cleaning

Use BEECK Lacquer Thinner to thoroughly clean equipment, tools and soiled clothing immediately after use.

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5. Storage
Stored in original container, tightly closed, can be kept for at least 12 months. Close opened container air-tight, remove any skin that has formed: do not stir it into the product. Never pour into solvent-swellable containers.

6. Hazard notes, safety instructions and disposal
Comply with the EC Safety Data Sheet. Safety data sheet available on request.
May cause sensitisation of susceptible persons. Contains Orange oil. May produce an allergic reaction. Cleaning cloths, paper or other materials that are used for absorption can become a potential fire hazard. Collect and safely dispose in closed, non-flammable containers after use.
Hazard statements: Harmful to aquatic life with long lasting effects.
Precautionary statements: Keep out of reach of children. Do not get in eyes, on skin, or on clothing. Avoid release to the environment. Disposal in accordance with the official regulations.
Waste disposal number: 080112

7. Declaration
This technical information is offered as advice based on our knowledge and practical experience. All information is provided without guarantee. It does not release the user from their responsibility to check the product suitability and application for the specific substrate on which it is to be used. Subject to change without notice as part of our product development. Non-system additives for tinting, thinning, etc. are not permitted. Check the colours before use. This information sheet automatically becomes invalid when a new edition is issued. The information in the current version of the EC Safety Data Sheets is binding for classification according to the Hazards identifications, disposal considerations, etc.

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