

Technical Information
and
Application-instructions
for

Brantho-Korrux

”nitrofest”

Description:

Brantho-Korrux “nitrofest” is a heavy duty, flat, 1-component coating showing excellent corrosion resistance and fast drying properties. Particularly suitable as a primer, also on manually prepared, rusty substrates. A two-coat system is weather-, seawater- and oil resistant.

Easy application very, good adhesion properties, can even be over-coated with nitro-cellulose and most 2-component coatings. Excellent coverage due to high solid contents. Environmental friendly, neither contains heavy metals nor aromatic hydrocarbon solvents.

Recommended areas of application:

Corrosion protection of iron and steel constructions, in rural, urban, industrial and maritime areas. A coating for new construction or maintenance, active corrosion protective primer for topcoats based on alkyd, acrylic resin, chlorinated rubber, bitumen polyurethane etc.

Corrosion protection for constructions, vehicles, machines, components, transport units etc. both primer and filler for large object applications or small article (O.E.M.) applications.

Manufactured by:

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Technical information

Product description:

Combination of short-oil resin modified Phthalate resins, combined with environmental friendly, active lead-, zinc- and chromate-free multi-phase corrosion-inhibitive pigments. Solvent combination is free of aromatic hydrocarbons like xylene or toluene.

- Viscosity: 140 sec. / DIN 4 mm
- Thinning:
 - * Branth's **Kombi-Thinner** (short drying time)
 - * Branth's **Spezial-Thinner** (retards initial drying)
 - * Nitro-thinner and or 2-C thinners may be used (check compatibility)
 - * White spirit, etc. are not suitable
- Density: 1,3 - 1,5 depends on colour
- Solids: 70 % (by weight)
50 % (by volume)
- Colours: See colour card. Colours can be mutually mixed unlimitedly.
Gloss: < 10 %
- Coverage: theoretical: 8,3 m²/l. at 60 µ dry
practical: depends on application losses, surface roughness, porosity etc.
- Storage stability:
24 months in unopened original cans, in a well ventilated dry environment.
- Packaging sizes:
5-ltrs.-cans with "material-saver" lids
750-ml-cans (8 or 16 per carton)
10-ltrs.- and 25-ltrs.-cans on special order (1 week production time)

Short Application instructions

Suitable substrates:

Iron and steel constructions, free from rust crusts, mill scale and loose coatings. Also suitable for concrete, wood, galvanised steel and corrugated, mineral fibre board. Brantho-Korrux "nitrofest" can be applied on flash-rust, manually prepared rusted surfaces (min. St 2) and wet blasted substrates and warrants optimum corrosion protection.

Temperatures:

ideal application temperature: +18°C to +25°C
possible application temperature: -10°C to +30°C

Application:

Brush and roller application without dilution;
Air atomised spray: 22-35 sec. tip size 1,2 - 1,8 mm; a larger opening requires less dilution; (equals 5-10% dilution).
Airless spray: viscosity 60 - 120 sec./ DIN 4 mm at minimal 180 bar, orifice size 0,017 - 0,019"; spray-angle 40 - 80°, (equals 3% dilution), only dilute if necessary (at low temperatures).

Drying times: at 20°C and 65% relative humidity

- touch dry: after 10 minutes
- dry to handle: after 2 hours
- completely dried: after 72 hours

Forced drying:

- After a 5-10 min. flash-off time, forced drying at elevated temperatures in a hot air circulating oven at a max. temperature of 100° can be carried out.
- Brantho-Korrux "nitrofest" is an air drying coating, do not add any accelerator or drying/ curing agent
- the exact drying times depend on film thickness, ventilation, temperature, relative humidity, etc.

Material consumption:

Theoretical consumption: 8,3 m² per litre at 60 µ dry film thickness, this dry film thickness can be achieved in a one-coat application. Practical consumption is between 150 and 200 ml per square metre.

Protection / Disposal

Please consult MSDS and information printed on the can.

Extended application instructions of Brantho-Korrux "nitrofest"

General

- Apply to general health and safety instructions, f.e. keep away from heat, sparks and open fire; do not eat, drink or smoke during application, use only in well ventilated areas (see safety information sheet)
- Always: **Stir well before use! Check colour!**
- Do not mix with other substances than indicated by manufacturer. Do not dilute for brush and roller application.

Iron and steel

- Remove rust and rust scale, loose mill scale, oil, grease and all other impurities by appropriate means. Apply coating on a clean and dry substrate only.
- Dependable on exposure apply one or more coats by brush or roller (do not dilute). For spray application dilute according recommendation printed in form.
- The service life increases at thicker total dry film thickness. In practice one up to 3 coats are recommended, dependable on exposure.
- On vertical objects a dry film thickness of 40 up to 80 μ without sagging can be easily applied (depends on application method).

Rusted steel

- Remove loose rust (rust scale), a sound substrate is required for optimum and lasting result (minimum degree of surface preparation up to St 2; (ISO 8501-1; 1988).
- **Brantho-Korrux "nitrofest"** penetrates into the rest rust. To prevent further corrosion of such a rough substrate, apply sufficient material (at least one extra coat).

Aluminium (light metals)

- Slightly abrade, adhesion promoter or primer is not required, degrease and clean the substrate properly.
- **Do not** abrade with steel fibre, preferably use a plastic fibre embedded abrasive (e.g. Scotch Brite® or similar).
- Apply normal thickness (not too thin!), in critical cases apply Brantho-Korrux "3 in 1".

New galvanised steel

- Slightly abrade, adhesion promoter or primer is not required, degrease and clean the substrate using a water-based cleaner/degreaser (e.g. multiclean).
- Carefully remove zinc salts (white rust). **Do not abrade with steel fibre**, preferably use a plastic fibre embedded abrasive (e.g. Scotch Brite® or similar).
- Only apply on a well-prepared, clean and dry substrate, free of grease, oil and all other contaminants, apply sufficient film thickness (min. 60 μ dry). In critical cases or for optimum weather resistance preferably apply Brantho-Korrux "2-Kompo", HgS or "3 in 1".

Dipping

- Due to its basic properties, short drying time, versatility, environmental acceptability, little sedimentation, excellent corrosion resistance, excellent edge covering, good coverage, etc., **"nitrofest"** is very suitable for dipping.
- The required viscosity depends on object and passing method, normally at 20-35 sec./ DIN 4 mm. Adjust viscosity with Branth's Kombi-Thinner or Butylacetate.
- We recommend to continuously stir the contents of the dipping vessel at very low speed, complete circulation of the vessel once or twice a day is considered sufficient (practical experience).
- The yearly consumption should be minimal twice the content of the vessel.

Electrostatic spray

- **"nitrofest"** can be applied with electrostatic spray equipment (both airless and air atomised), the material shows an electrical conductivity of > 100 k-Ohm is. Dilute according equipment manufacturer's specifications. Upon request, at special price, the material can be delivered at customer specification (min. 25 l.).

Overcoating

- abrading/sanding is not necessary;
- can be overcoated with any 1 component paint at any time;
- can be overcoated with all 2 component coatings known to us (leave enough time to dry through again);
- overcoating with 2-compo-surfacer is difficult and not generally recommended.

Resistance and approvals of Brantho-Korrux "nitrofest"

Approvals

- o "nitrofest" is successfully TÜV certified as a lead- and chromate free coating for protection against corrosion (TÜV-Zert.-Nr. U 9702 14153001).
- o "nitrofest" is approved by the German Railways (DB) for vehicle maintenance as primer for manually prepared (St 2) substrates (WL 30.01.01), Article No.: 587.99.64.
- o "nitrofest" is approved by the DVGW-Research Institute as suitable coating for potable water equipment, fittings, pumps and support equipment (17.2.1988).
- o "nitrofest" is resistant against light and medium fuel oil, diesel oil, petrol, gear oil and hydraulic oil. (But do only use 2-Component-Products for permanent resistance against modern petrol and diesel.)
- o "nitrofest" shows an excellent dry heat resistance (up to 200° C, red brown up to max. 300° C, discoloration is possible from 120° C and up).
- o "nitrofest" resists: Sodium Carbonate solutions, ammonia vapours, exhaust gas atmospheres and diluted hydrochloric acid.
- o "nitrofest" is not affected after 480 hours salt spray test according DIN 50021 (from 80 µ and up). There is a longer salt-spray-resistance for higher film-thicknesses.
- o "nitrofest" is not affected in the condensation alternation climate test according DIN 50017 at 40° C (60 cycles, at 100 µ d.f.t.).
- o "nitrofest" is not affected in the exchange test: 2 hours at -5° C saturated salt-solution followed by 22 hours condensation water at 40° C (20 cycles at 100 µ d.f.t.).
- o "nitrofest" is not affected in the condensation-exchange test in SO₂ containing atmosphere according DIN 50018 SFW 0,2 S (30 cycles, from 150 µm d.f.t. including topcoat).
- o "nitrofest" shows excellent adhesion on bare iron and steel, and manually prepared rusted steel. Measuring value Gt 0 (according DIN 53151 crosscut adhesion test) before and after condensation tests.
- o "nitrofest" does not contain materials marked very hazardous, hazardous, etching, irritating, sensibilising, carcinogen, reproduction system endangering, genetic manipulating, explosion hazardous, fire promoting, high or light inflammable (it does not contain lead, chromate, aromatic hydrocarbons, xylene, PVC, etc).
- o **EU-VOC-legislation:**
VOC-content in Brantho-Korrux "nitrofest" as delivered ready for brush- and roller application: 420 g/l. After thinning for airless-spray: 440 g/l. After thinning for conventional spray-application: 460 g/l (depending on pressure, nozzle size and temperature). EU 2004/42/EG limit values: 2004/42/II A (i) 500 (2010) 500; II B C 540/540.

The information herein contained is based on our present knowledge. It is based on practical experience during many years and is composed carefully. The technical information is average, and values do not impose any liability. As the application of this material in any individual case is beyond our control we cannot be held liable.