GTF Freese
Marine Floorings

Product Data Sheet

TEFROKA HLS Coating

Solvent-free highly wear resistant epoxy coating for marine decks

Application Areas

Highly wear resistant solvent free coating for indoor and outdoor flooring applications. The product shows excellent adhesion to metallized substrate as well as very good chemical resistance against oils, solvents, diluted acids and bases. The product ist part of the TEFROKA HLS coating system.

Product Features

- low odor, environmentally friendly in handling, application and disposal.
- very low VOC content (< 1 % w/w)
- harmless after curing
- no explosion protection required
- in contrast to solvent based systems, low risk of crack formation caused by solvent retention

- no risk of blisters, tears, shrinkage, pinpricks or intermediate adhesion problems caused by solvent inclusions.
- recommended layer thickness approx. 200-300 µm (vertical application) Stability up to 400 µm, horizontally up to 2000 µm possible.

- very good adhesive strength on various substrates such as unalloyed steel, aluminum, specially cleaned zinc substrates etc.
- excellent chemical resistance
- saponification stable and alkaline resistant
- the coating does not tarnish when there is high humidity or dew formation present
- very good impact and abrasion resistance

Technical Specification

Mixing ratio part A : part B	6 : 1	by weight
(Note: only process complete units)	3,9 : 1	by volume
Volume solids	ca. 100	%
Mixed density 23 degree Celsius	ca. 1,50	kg/dm³
Mixed viscosity 23 degree Celsius	ca. 2000 ± 300	mPa*s
Shore D after 7 Days	ca. 80 - 85	
VOC EU Paint Directive 2004/42/EC (calculated)	ca. 3.4	g/l
Flash point	>95	°C

Surface Preparation

The surface to be coated must be solid, dry, free of grease, wax, silicone, rust, load bearing and free from separating native or foreign substance. Less solid layers must be free of metal processing residue, rust and other layers. Weld seams are to be removed and should be treated conform to DIN EN 148791. The surface should be prepared according to DIN EN ISO 12944 Part 4 with SA 2 1/2 and pretreated with an average roughness depth of Rz Z 50 ym to achieve optimal properties.

Processing

The dew point distance (at least 3 degree Celsius) must be observed during surface preparation the application. The object temperature should not be below +10 degree Celsius and a relative humidity above 85 %. The processing and cure time is increased at low temperatures and shortened at high temperatures. No other materials may be added to the coating material.

Mixing:

The product is always delivered in the right mixing ratio (component A and B), Mix component A thouroughly using a jiffy type mixer at approx. 300 rpm. Then add component B while stirring and mix for 3 minutes. To avoid mixing and / or ratio errors the material has to be poured into a a clean container (repotted) and thoroughly mixed again. Sediments should be mixed thoroughly and a necessary homogeneous mixture should be achieved. The temperature of the individual components should be 18-25 degree Celsius before mixing. The used material may need to be heated with a hose heater to the required temperature.

Coating:

The thoroughly mixed material is applied by means of a brush or a roller in the required film thickness (applied thickness = dry film thickness).

The general application steps are as follows:

1. buffer coat (protection layer against physical penetration of underlying anti-corrosion coatings by coarse fillers (like corundrum): The single coat application is done by brush or roller in a total thickness of 400 micrometer (600 g/sq.m).
2. sprinkle coat: The single coat application is done by brush or roller in a total thickness of 400 micrometer (600 g/sq.m) after the buffer coat has cured for 24 hours. Into the fresh filler coat corundum (grain size 0.5 - 1.0 mm) is sprinkled in excess. After this coatings has completely cured unbound corundum is removed by means of a brush or sweep.
3. binding coat: after the sprinkle coat has cured and the excess corundum was removed a binding coat made of TEFROKA HLS Coating diluted with approx 5 % EP-Thinner is applied by means of a roller. (consumption: 400 g/sq. m)

For UV and weather protection final sealer coat with TEFROKA HLS-Sealer is applied (see resp. data sheet)

Cleaning:

All application equipment must be cleaned with a special cleaner, TEFROCOR CLEANER, immediately after use. The frequency of cleaning depends on the amount of material used, the temperature and the time elapses. All excess material and empty containers have to be disposed in accordance with the locally laws and regulations.

Application data

Application temperature		+10 °C	+20 °C	+30 °C
Pot life	ca.	200 minutes	100 minutes	45 minutes
Touch dry	ca.	20 hours	10 hours	5 hours
Ready for mechanical stress	ca.	120 hours	60 hours	30 hours
Ready for chemical stress	ca.	21 days	14 days	7 days
maximum rel. air humidity	ca.	85 %	85 %	85 %
dry to over coat (with itself)	ca.min.	9 hours	6 hours	3 hours

	ca.max.	3 months*	3 months*	3 months*

Packaging

28 kg – Metall Containers

Colors

red brown, grey, black and other colors are available

- due to raw material and manufacturer reasons, slight color / batch deviations are possible
- like all epoxy coatings, these tend to chalk due to weathering and UV-exposure and lead to color changes
- a weather resistant top coat is therefore necessary for outdoor application

Storage

6 month for component A and B ; cool, dry and frost free in the unopend, original container at 15 - 25 degree Celsius, protect from direkt sunlight and heat.

*Note: Maximum waiting period between to coats: 3 months. The coating surface must be clean and free of any substances that might affect adhesion between two coats. Surface contaminations must be removed by sweep-blasting, the coating surface must be slightly brushed up to ensure optimal adhesion of the second coat. Dust has to be removed with suitable techniques and cleaners. do not use water to clean the surface.

Important notice

Work protection and safety measures:

Please refer to the corresponding material safety data sheets for work protection and safety measures. National regulations and limitations have to be obeyed, please contact national authorities for details and advice.

Disposal:

Material and containers must be disposed properly according to local regulations, please contact national authorities for details and advice.

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