

**Two-component ethyl silicate resin zinc-rich primer coating
for steel surfaces**

BASF-specification: 3343 417

■ **FIELDS OF APPLICATION**

High-grade zinc-rich primer for protective coatings of shot-blasted steel surfaces, e.g. for steel structures, ship building, for machines and equipment, containers and similar objects.

GEHODUR-F330-Zinc-S2 is to be used as protective coating without subsequent top coatings or as protective primer coating under suitable top coatings.

The use of GEHODUR-F330-Zinc-S2 in the application range of the ChemVOCFarbV (Decopaint-Directive) is not allowed (e.g. coating of buildings or parts of buildings).

■ **PRODUCT PROPERTIES**

GEHODUR-F330-Zinc-S2 provides inorganic coating films with very high resistance to abrasion, excellent corrosion protection and temperature resistance up to 450 °C.

GEHODUR-F330-Zinc-S2 is resistant to water, mineral oils, fuels, aliphatic hydrocarbons as well as several other solvents. In case of contact with salt water or aggressive atmospheres we recommend the application of suitable top coatings.

GEHODUR-F330-Zinc-S2 can be coated over with a multitude of different one- or two-component top coatings. However, as with all zinc-rich primers, the top coats must be „compatible“ to zinc.

Interesting information about zinc-rich primers can be found in „Merkblatt Nr. 4 (Information leaflet No. 4)“ with the title „Zinkstaub-Anstrichmittel und Anstriche auf Zinkstaub-Grundanstrichen“ („Zinc-rich paints and paintings on zinc-rich primer coats“) published by the Bundesausschuss Farbe und Sachwertschutz (Federal Committee for Paint and Protecting Agents), Frankfurt/Main, Börsenstr. 1.

■ **PRODUCT DATA**

GEHODUR-F330-Zinc-S2

B-Component (Powder)

Product number F86-792 grey

FX-86

Colour Grey

Mixing ratio 1 part by weight

2.5 parts by weight

Standard packaging 6 kg net weight
(mixture kit)

15 kg net weight

Shelf life

At least 6 months in original cans - store dry and cool.
The B-Component (powder) reacts intensively with water; therefore contact with humidity has absolutely to be avoided.

Suitable thinner

V-627
V-561 (in case of high air temperature)
Both thinners can also be used for cleaning of the equipment

Theoretical consumption

0.333 kg/m² = 3.0 m²/kg at a dry film thickness of 80 µm

Coating systems When it is not intended or necessary to apply top coats, one or two layers of GEHODUR-F330-Zinc-S2 should be applied, with a combined nominal dry film thickness of approximately 100 µm.

When top coats are to be applied, usually one layer of GEHODUR-F330-Zinc-S2 will be applied, with a nominal dry film thickness of 80 µm. A dry film thickness of more than 150 µm must be avoided, especially in single layer coating systems.

The choice of coating materials as well as their number and film thickness depends on the stress to be expected, existing specifications and the methods of application.

■ INSTRUCTIONS FOR APPLICATION

Surface preparation Blast-cleaning in accordance with DIN EN ISO 12944-4, surface preparation grade Sa 2 ½.
G-grade medium roughness in accordance with DIN EN ISO 8503-1.

**Air and surface
temperature** -10 °C to max. +40 °C

Relative humidity Optimal results at 60 to 80 % relative humidity.

The surface temperature of the parts to be coated must be at least 3 °C above the dew point of the surrounding air throughout the application.
(see basic specification for corrosion protection DIN EN ISO 12944-7)

Comments on processing

- Mixing**
- GEHODUR-F330-Zinc-S2, Component A (binder) and Component B (powder) are delivered in their respective amount in barrels.
 - Fill half of the amount of GEHODUR-F330-Zinc-S2 and Component A (binder) in a clean and dry container.
 - Add Component B (powder) slowly under continuous stirring with a mechanical mixer. Stir until the powder is homogenously spread.
 - Add the rest of Component A (binder) under continuous stirring.
 - After a pre-reaction time of 15 minutes the mixture must be stirred again. Then the mixture is ready for use.
 - If GEHODUR-F330-Zinc-S2 shall be applied by spraying, the mixture should be sieved through a 30 mesh sieve (mesh seize approx. 0.3 mm) before use.

Application methods

Means of application/parameters	Addition of thinner
<u>Brush application and roller coating</u>	GEHODUR-F330-Zinc-S2 can be applied by brush or roller coating. However, we recommend these methods only for small areas or for repair work.
<u>Airless spraying:</u> Nozzle diameter: 0.33 to 0.58 mm Special airless devices or pumps are used for the application for GEHODUR-F330-Zinc-S2. So-called slow runners with high compression are suited best.	0 to 3 %
<u>High pressure/air spraying</u> Vessel pressure : 0.8 to 1.2 bar Application pressure: 2.7 to 3.5 bar Nozzle diameter 1.5 mm We recommend the use of a pressure vessel with built-in stirrer.	5 to 8 %

Further recommendations for application:

- Stir mixture occasionally.
- Keep the pressure vessel at the same level as the material hose, if possible place it above the place of work.
- The pressure of the material, the spray pressure and the distance of the pistol from the surface must be adjusted to the ambient conditions. In hot or windy weather hold the pistol closer to the surface and reduce the pressure to avoid "dry" spraying. The film applied must be "wet".
- On beams and angled surfaces spray the edges first.

Cleaning of equipment Immediately after use with thinner V-627 respectively thinner V-561

Pot life Approximately 10 hours (related to a temperature of 20 °C)

Drying and curing times Note:
 GEHODUR-F330-Zinc-S2 requires moisture for curing. Therefore a relative air humidity of 60 to 80 % is desirable. Higher air humidity or even dew, mist or rain are not detrimental already half an hour after application. The curing process is considerably prolonged at an air humidity of under 50 %. Coats which are already dry to touch can be sprayed with water to accelerate the curing. In the case of extremely low air humidity this process must be repeated several times.
 Inside buildings or containers, curing can be accelerated by moist fresh air from outside.

Dry to touch:	After approx. 5 minutes
Resistant to rain:	After approx. 30 minutes
Tack-free:	After 2 to 3 hours
Over-coating with GEHODUR-F330-Zinc-S2:	After 2 to 3 hours
Over-coating with other top coatings:	After 24 hours

(Related to a dry film thickness of 80 to 100 µm, at a relative humidity of 60 % and a temperature of 20 °C)

Important note: Before application of top coats, GEHODUR-F330-Zinc-S2 must be cured through totally, since the curing process of GEHODUR-F330-Zinc-S2 by air humidity is to a large extent prevented by top coats.

■ SAFETY MEASURES

GEHODUR-F330-Zinc-S2 Component B (powder) reacts intensively with water, forming inflammable gases. For this reason any exposition to moisture must absolutely be avoided.

In case of coating in enclosed rooms, pits etc good ventilation and breathing equipment shall be provided. GEHODUR-F330-Zinc-S2 contains solvents.

The relevant data concerning safety measures, e.g. declarations according to regulations for dangerous goods and VbF can be found in the material safety data sheet of this product.

Hazard notes and safety recommendations can be found on the labels of the containers. Furthermore the relevant regulations must be observed, e.g. the rules and regulations for the prevention of occupational accidents of the German Berufsgenossenschaften.

The statements made here are based on the present state of our knowledge. We do not assume liability for damages resulting from the use of the material or from any advice given by our employees. In this respect, any advice given by our employees has to be seen as not binding. The processor is responsible for the supervision of construction, the maintaining of process guidelines and the observation of the established rules of techniques, even if our employees are present at the time our material is being applied.

This information is subject to modifications due to technical improvements. The latest edition of this information replaces all previous issues.