LACK– UND KUNSTSTOFF– CHEMIE GMBH

TECHNICAL INFORMATION

GEHODUR-F86-Zink

2C-ESI Zinc rich Primer
for steel surfaces
TL/TP-KOR-Stahlbauten, Blatt 86

■ 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-F86-Zink is to be used as protective coating without subsequent top coatings or as protective primer coating under suitable top coatings.

The use of GEHODUR-F86-Zink in the application range of the ChemVOCFarbV (Decopaint-Directive) is not allowed (e.g. coating of buildings or parts of buildings).

■ PRODUCT PROPERTIES

GEHODUR-F86-Zink provides inorganic coating films with very high resistance to abrasion, excellent corrosion protection and temperature resistance up to 450 °C.

GEHODUR-F86-Zink 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-F86-Zink can be coated over with a multitude of different one- or two-pack 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.

Test certificates

- The product has obtained admittance of the Bundesanstalt für Straßenwesen BASt (German Federal Highway Research Institute) in accordance with TL/TP-KOR-Stahlbauten Blatt 86 and is subject to regular external control.

■ PRODUCT DATA

	GEHODUR-F86-Zink	B-Component (Powder)
Product number	F86-790 grey Code-Nr. 686.03	FX-86
Mixing ratio	1 part by weight	2.5 parts by 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	

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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-F86-Zink 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-F86-Zink 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.

Suitable intermediate and top coatings:

Product	Binder basis
GEHOPON-E87-ZB	2-pack EP
GEHOPON-E97R-ZB	2-pack EP
GEHOPON-E5-Protect	2-pack EP
WIEREGEN-M87	2-pack PUR
GEHOPAL-L75	1-pack PVC
GEHOPAL-L77	1-pack PVC/AY
GEHODUR-S3	1-pack Si

Please take further notes from the „Planungshilfen“ (planning helps) in the TL/TP-KOR Stahlbauten (sheet 86).

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-F86-Zink, Component A (binder) and Component B (powder) are delivered in their respective amount in barrels.
- Fill half of the amount of GEHODUR-F86-Zink 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-F86-Zink 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
Brush application and roller coating	GEHODUR-F86-Zink can be applied by brush or roller coating. However, we recommend these methods only for small areas or for repair work.
Airless spraying: Nozzle diameter: 0.33 to 0.58 mm Special airless devices or pumps are used for the application for GEHODUR-F86-Zink. So-called slow runners with high compression are suited best.	0 to 3 %
High pressure/air spraying 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-F86-Zink 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-F86-Zinc:	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-F86-Zink must be cured through totally, since the curing process of GEHODUR-F86-Zink by air humidity is to a large extent prevented by top coats.

■ SAFETY MEASURES

GEHODUR-F86-Zink 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-F86-Zink contains solvents.
The relevant data concerning safety measures can be found in the material safety data sheet of this product.
The valid issue of the material safety data sheet is available from our website www.geholit-wiemer.de.

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