LACK– UND KUNSTSTOFF– CHEMIE GMBH

TECHNICAL INFORMATION

GEHOPON-E9-Primer

Two-pack epoxy combination high-solid primer coating for steel structures under high corrosion stress - on steel, hot-dip galvanised steel, old coatings -

■ FIELDS OF APPLICATION

For high-grade corrosion protection of steel structures which are exposed to high stresses caused by aggressive atmosphere, de-icing salt, condensation etc., e.g. for chemical plants, harbour constructions, street and railway constructions. The number of layers depends on the respective stress.

■ PRODUCT PROPERTIES

GEHOPON-E9-Primer, based on a two-pack epoxy resin combination and pigments with a high barrier-effect, is a product with a high solid content by volume.
The material is preferably applied by airless spraying with dry film thicknesses of 100 to 160 µm per working operation. Brush application or roller coating (80 µm) is also possible, however in this case a specific surface texture will be obtained.

Capacities

Together with suitable two-pack top-coatings, corrosion protection systems can be obtained with excellent mechanical resistance properties, stability against chemicals and aggressive atmosphere as well as weather and light resistance.

Temperatures resistance (dry heat): up to 120 °C (permanent)

■ PRODUCT DATA

	GEHOPON-E9-Primer	Curing agent
Product number and colours	E9-102, sand yellow approx. RAL 1002 E9-812, red brown approx. RAL 8012	EX-9
Mixing ratio	12 parts by weight	1 part by weight

Form of delivery Ready for application after mixture with curing agent

Shelf life At least 12 months in original cans at normal temperature.

Suitable thinner V-568

Theoretical parameters

GEHOPON-E9-Primer , E9-102

Density (g/mL)	Solid content (weight %)	VOC-content (weight %)	VOC-content per 10 µm DFT* (g/m²)	Solid content by volume (%)	Solid content by volume (mL/kg)
1.7	87	13	3	74.5	438
DFT (µm)	Calculated wet-film thickness (µm)	Consumption (kg/m²)		Spreading rate (m²/kg)	
80	107	0.183		5.5	

Remarks

- All values are relevant fort he mixture in case of two-pack materials
- DFT: Dry film thickness
- All values named are approximate values and relevant fort he quality (colour). The values may differ slightly for other colours.

* baseline for calculation: consumption in g/m² at DFT 10 µm

Notes referring to Directive 2004/42/EC „Decopaint-Directive“

Subcategory as referred to in Annex IIA	VOC limit values (Phase II from 2010)	Max. VOC content of the product in its ready for use condition (including the max. amount of diluents as given in “Application methods”)
J (“Two-pack reactive performance coatings”) Type SB	500 g/l	< 500 g/l

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Coating systems

Substrate	Steel	
Surface preparation	Blast-cleaning in preparation grade Sa 2 ½ in accordance with DIN EN ISO 12944-4	
	Product	**NDFT (µm)**
Primer coating	GEHOPON-E9-Primer	100 to 160
Intermediate coating/s	GEHOPON-E9-Intermediate	100 to 160
Top coating	WIEREGEN-M5	100 to 150

Substrate	Hot-dip galvanised steel in accordance to DIN EN ISO 1461	
Surface preparation	Sweep blasting in accordance to DIN EN ISO 12944-4 Sweep blasted surfaces must show a dull surface	
	Product	**NDFT (µm)**
Primer coating	GEHOPON-E9-Primer	100 to 160
Top coating	WIEREGEN-M5	100 to 150

The coating system/s named are examples proved in practice which usually can be modified. 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

Steel surfaces:
Blast-cleaning in accordance with DIN EN ISO 12944-4, surface preparation grade Sa 2 ½.
If a surface preparation by blast-cleaning is not possible, a manual or automatic derusting is also possible, but at least in surface preparation grade St 3.

Hot-dip galvanised steel surfaces:

Dry and clean surfaces are essential for good adhesion of coating materials. Besides contaminants like grease, oil, dust, etc. especially zinc salts (zinc corrosion products) have to be removed totally.
In case of high-grade two-pack systems with high film stability this is particularly important when the parts are to be exposed to natural weathering or condensation.
Remark: Zinc salts are forming relatively quick and cannot - or hardly - be recognised at the beginning.

Coatings
Adhesion-reducing substances must be removed.

GEHOPON-E9-Primer can be applied on several intact one or two-pack old coatings.
We recommend test areas with the necessary surface preparation / cleaning.

GEHOPON-E9-Primer

Air and surface temperature

Optimal results at temperatures of 15 to 25 °C, not below 10 °C

Relative humidity

Max. 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).

The influence of moisture during the curing process can result in discolouring, blooming or a slight occurrence of scars.

Comments on processing

Mixing

Mix thoroughly with the enclosed quantity of curing agent, preferably with a mechanical mixer. Material must be stirred again after 15 minutes. Then the mixture is ready for use.

Application methods

Means of application / parameters	recommended nominal dry film thickness per working operation	Addition of thinner V-568
Airless spraying Nozzle diameter: 0.38 to 0.74 mm Material pressure: 150 to 300 bar	80 to 160 µm	2 to 4 %
Roller coating / brush application	60 to 80 µm	up to 2 %
In case of roller coating / brush application several working operations can be necessary to obtain a uniform layer thickness and appearance. Among other things this depends on the colour, the processing procedures and equipment, the ambient conditions and the geometry of the parts to be coated.		

Remarks

- The values above are related to a temperature of approximately 20 °C and are recommendations respectively rough guides. In practice it may be necessary to make modifications.

Cleaning of equipment

Directly after use with V-568

Pot life

Approximately 4 hours (depending on temperature)

Drying and curing times

(At a temperature of 20 °C and a dry film thickness of 160 µm)

Dry to touch: After approx. 1 hour
Tack free: After 5 to 6 hours
Ready for over-coating: After 16 to 24 hours

Waiting time between working operations

Air temperature		5 - 10 °C	10 - 15 °C	15 - 20 °C
Waiting time	minimum	3 - 4 days	2 days	1 day

■ SAFETY MEASURES

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.