LACK– UND KUNSTSTOFF– CHEMIE GMBH

TECHNICAL INFORMATION

GEHOPON-E7-Metallgrund, E7-801
GEHOPON-E7-Metallgrund-NV, E7-884

2C-EP Primer

■ FIELDS OF APPLICATION

Two-pack epoxy-resin based coating for hard, durable as well as water and chemical resistant coatings on steel surfaces, e.g. generators and mechanical parts.

■ PRODUCT PROPERTIES

GEHOPON-E7-Metallgrund contains an epoxy resin binder with a special curing agent. GEHOPON-E7-Metallgrund is usually applied by airless spraying. With the standard composition E7-801 a dry film thickness of ≥ 80 µm can be applied in one working operation. Application by brushing or roller coating is also possible. The material composition E7-884 with low viscosity is usually applied by spraying, where a dry film thickness of approximately 50 µm can be achieved.

Cured coatings are highly resistant to mechanical stresses as well as resistant to abrasion, compression, petrol and oil as to a large extent resistant to water, lye and solvents.

Temperature resistance:
Permanent stress (Test period 5000 hrs): 160 °C
Short-term stress / tempering: up to 180 °C (several hours)

■ PRODUCT DATA

	GEHOPON-E7-Metallgrund	GEHOPON-E7-Metallgrund-NV
Product number	E7-801	E7-884
Colour	red brown	red brown
Mixing ration	7 : 1 parts by weight with curing agent EX-36	4 : 1 parts by weight with curing agent EX-84
Shelf life	At least 12 months in original cans at normal temperature.	
Suitable thinner	Thinner V-74 or V-538 (also for cleaning of equipment)	

Theoretical parameters

GEHOPON-E7-Metallgrund, E7-801

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)
1.6	89	11	2.2	79	494
DFT (µm)	Calculated wet-film thickness (µm)	Consumption (kg/m²)		Spreading rate (m²/kg)	
80	102	0.162		6.2	

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Theoretical parameters

GEHOPON-E7-Metallgrund-NV, E7-884

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)
1.5	81	19	4.3	67	447
DFT (µm)	Calculated wet-film thickness (µm)	Consumption (kg/m²)		Spreading rate (m²/kg)	
50	74	0.112		8.9	

Remarks

- All values are relevant for the 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

■ INSTRUCTIONS FOR APPLICATION

Coating system

Substrate	Steel	
Surface preparation	Blast-cleaning in preparation grade Sa 2 ½ in accordance with EN ISO 12944-4	
	Product	**NDFT (µm)**
Primer coating	GEHOPON-E7-Metallgrund resp. GEHOPON-E7-Metallgrund-NV	80 50 (see specification)
Top coating	GEHODUR-S10	40

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 EN ISO 12944-7)

Comments on processing

Mixing

Mix with the enclosed quantity of curing agent, preferably with a mechanical mixer. Material must be stirred again after 10 minutes. Then the mixture is ready for use.

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Application methods

Means of application / parameters	GEHOPON-E7-Metallgrund E7-801	GEHOPON-E7-Metallgrund-NV E7-884
	Addition of thinner V-74 or V-538	
	For a dry film thickness of approx. 80 µm	For a dry film thickness of approx. 50 µm
Airless-spraying Nozzle diameter: 0.33 to 0.38 mm Material pressure : approx. 200 bar	up to 5 %	-
High pressure / air spraying Nozzle diameter: 1.0 to 1.5 mm Pressure: 3 to 4 bar	up to 8 %	-
Roller coating / brush application (depending on temperature)	up to 3 %	-
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

With thinner V-74 or V-538

Pot life

3.0 hours at 10 °C
1.5 hours at 20 °C
1.0 hour at 30 °C
0.5 hour at 40 °C

Drying and curing times

	At a DFT of 50 to 80 µm and an air and object temperature of			
	10 °C	20 °C	30 °C	40 °C
Dry to touch (TG 1):	approx. 10 h	approx. 2 h	approx. 1 h	approx. 45 minutes
Tack free (TG 3):	approx. 20 h	approx. 6 h	approx. 3 h	approx. 2 h
Ready for over-coating (TG 6):	26 to 28 h	10 to 11 h	3.5 to 4.5 h	2 to 3 h

(TG = degree of drying in accordance with DIN 53150)

Additional information:

- Curing of GEHOPON-E7-Metallgrund can be accelerated by using higher temperatures, e.g. 30 minutes at 80 °C.
- waiting period until over-coating:
  maximum 5 days at 20 °C,
  afterwards only after a mechanical abrasive surface preparing (sweep-blasting or grinding) and a subsequent cleaning

■ SAFETY MEASURES

The curing agent produces an alkaline reaction on skin and mucous membrane (eyes). Soiling must be avoided. In case of direct contact clean thoroughly with water and soap.

When application works are executed under bad ventilation conditions (closed rooms, mines etc.) it is necessary to provide for good airing and breathing masks in order to remove vapours which are being set free.

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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