LACK– UND KUNSTSTOFF– CHEMIE GMBH

TECHNICAL INFORMATION

GEHOPON-E87-Intermediate

Two-pack epoxy MIO intermediate coatings
TL/TP-KOR-Stahlbauten, Blatt 87

■ FIELDS OF APPLICATION

MIO intermediate coating for corrosion protection of steel structures.

■ PRODUCT PROPERTIES

GEHOPON-E87-Intermediate is a two-pack material based on epoxy resin MIO. Together with suitable primer coatings it is possible to achieve both excellent mechanical resistance and outstanding corrosion protection of steel.

After suitable surface preparation (see “Instructions for application”), hot-dip galvanised steel parts can also be coated directly with GEHOPON-E87-Intermediate.

Capacities

GEHOPON-E87-Intermediate is resistant to natural weathering, even in aggressive atmosphere, as well as to oils, greases and diluted acids and lyes.

Temperature resistance: up to 120 °C (dry heat).

Test certificates

- The products have obtained admittance of the Bundesanstalt für Straßenwesen BASt (German Federal Highway Research Institute) in accordance with TL/TP-KOR-Stahlbauten Blatt 87 and are subject to regular external control.

■ PRODUCT DATA

	GEHOPON-E87-Intermediate		Curing agent
Product number and colours	E87-7602 grey DB 702, E87-7603 grey DB 703, E87-6601 green DB 601,	code number 687.12 code number 687.13 code number 687.14	EX-74
Mixing ratio	15 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-538

Theoretical parameters

GEHOPON-E87-Intermediate, E87-7602

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)
1.75	82	18	5.0	63	360
DFT (µm)	Calculated wet-film thickness (µm)	Consumption (kg/m²)		Spreading rate (m²/kg)	
80	127	0.222		4.5	

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

D-76670 Graben-Neudorf PO-Box 1120 D- 76676 Graben-Neudorf Sofienstraße 36 Tel. +49 7255 99-0 Fax +49 7255 99-123
D-47005 Duisburg PO-Box 100529 D- 47249 Duisburg Obere Kaiserswerther Str. 18 Tel. +49 203 99707-0 Fax +49 203 99707-10

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

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-E87-Zinc	70
Intermediate coating	GEHOPON-E87-Intermediate or WIEREGEN-M87-Intermediate in 1 to 2 working operations	80 to 160
Top coating	WIEREGEN-M87	80

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.

Please take further notes from the “Planungshilfen” (planning helps) in the TL/TP-KOR Stahlbauten Annex G, Blatt 87.

■ INSTRUCTIONS FOR APPLICATION

Surface preparation

Coatings
Adhesion-reducing substances must be removed.

Hot-dip galvanised steel surfaces:
If GEHOPON-E87-Intermediate is to be applied directly on hot-dip galvanised surfaces please observe the following instructions:
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.
For hot-dip galvanised steel parts, which shall be exposed to natural weathering or condensation, a surface preparation by sweep-blasting (in accordance with DIN EN ISO 12944-4) is necessary. Sweep-blasted parts must show a matted surface.
Remark: Zinc salts are forming relatively quick and cannot - or hardly - be recognised at the beginning.

Air and surface temperature

Optimal results at temperatures of 15 to 25 °C, not below 5 °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)

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-538
Airless spraying Nozzle diameter: 0.33 to 0.58 mm Material pressure: 150 to 250 bar	80 to 100 µm	up to 5 %
High pressure/air spraying Nozzle diameter 1.5 to 2.0 mm Pressure approx. 3.5 to 4.5 bar	80 to 100 µm	4 to 7 %
Roller coating / brush application	40 to 60 µm	-
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-538

Pot life

Air temperature	+ 10 °C	+ 20 °C	+ 30 °C
Max. pot life	8 h	6 h	4 h

Over-coating interval

Air temperature		+ 10 °C	+ 20 °C	+ 30 °C
Waiting time	minimum	15 h	10 h	6 h

Drying and curing times
Drying stage in accordance with DIN 53150 at 80 µm DFT

Air temperature	+ 7 °C	+ 23 °C
Drying stage 1 (dry to touch)	≤ 2 h	≤ 1 h
Drying stage 6 (tack free)	≤ 20 h	≤ 10 h

■ 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.

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.