LACK– UND KUNSTSTOFF– CHEMIE GMBH

TECHNICAL INFORMATION

GEHOLIT-K93

High-build protective coating system
TL/TP-KOR-Stahlbauten, Blatt 93

■ FIELDS OF APPLICATION

High-grade, low-solvent one-pack protective coating. It is suitable especially for rehabilitation and overhaul of old coatings based on one-pack coating materials. GEHOLIT-K93-Intermediate and GEHOLIT-K93 are also suitable for the use on galvanised surfaces.

■ PRODUCT PROPERTIES

GEHOLIT-K93 is produced using a specially modified synthetic resin combination, special active pigmentation, corrosion protecting high-grade micaceaous iron oxide, aluminium and/or colouring pigments.
Preferably, the material is applied by brush application or airless spraying. In one working operation it is possible to achieve a dry film thickness of 80 to 100 µm.
GEHOLIT-K93 is temperature resistant up to 120 °C

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 93 and are subject to regular external control. Further colours (without code numbers - “Stoff-Nr.”) conform to the requirements of the TL/TP-KOR-Stahlbauten.

■ PRODUCT DATA

Product number and colours	GEHOLIT-K93-Primer	GEHOLIT-K93-Intermediate	GEHOLIT-K93
	K93-102 sand yellow K93-812 red brown	K93-MIO colours according to Blatt 93	K93-RAL and MIO-colours according to Blatt 93
Degree of gloss			mat

Form of delivery brushable

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

Suitable thinner Thinner V-76

Theoretical parameters

GEHOLIT-K93-Primer red brown, K93-812

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)
1.55	80.5	19.5	4.8	62.5	405
DFT (µm)	Calculated wet-film thickness (µm)	Consumption (kg/m²)		Spreading rate (m²/kg)	
80	128	0.200		5.0	

Theoretical parameters

GEHOLIT-K93-Intermediate, K93-7602

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)
1.6	80.5	19.5	5.1	61	385
DFT (µm)	Calculated wet-film thickness (µm)	Consumption (kg/m²)		Spreading rate (m²/kg)	
80	131	0.210		4.8	

GEHOLIT-K93, K93-E7603

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	79.5	20.5	5.1	60.5	400
DFT (µm)	Calculated wet-film thickness (µm)	Consumption (kg/m²)		Spreading rate (m²/kg)	
80	133	0.200		5.0	

GEHOLIT-K93, K93-M5010

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	79.5	20.5	5.0	61.5	425
DFT (µm)	Calculated wet-film thickness (µm)	Consumption (kg/m²)		Spreading rate (m²/kg)	
80	131	0.188		5.3	

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 for the 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”)
i (“One-pack performance coatings”) Type SB	500 g/l	< 500 g/l

Coating systems

Substrate	Steel	
Surface preparation	Automatic or manual derusting at least with preparation grade St 3 in accordance with DIN EN ISO 12944-4	
	Product	**NDFT (µm)**
Primer coating	GEHOLIT-K93-Primer	80
Intermediate coating	GEHOLIT-K93-Intermediate	80 to 120
Top coating	GEHOLIT-K93	80 to 120

Substrate	hot-dip galvanising	
Surface preparation	Blast-Cleaning in accordance with DIN EN ISO 12944-4	
	Product	**NDFT (µm)**
Intermediate coating	GEHOLIT-K93-Intermediate	80 to 120
Top coating	GEHOLIT-K93	80 to 120

The coating system/s named are examples proven 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 93.

■ INSTRUCTIONS FOR APPLICATION

Surface preparation

Steel surfaces:
Blast-cleaning in accordance with DIN EN ISO 12944-4, surface preparation grade Sa 2 ½.

Hot-dip-galvanised steel:
Cleaning in accordance with DIN EN ISO 12944-4.

Old Coatings:
Adhesion-reducing substances must be removed.

Automatic or manual derusting in accordance with DIN EN ISO 12944-4, surface preparation P Ma respectively St 2 or St 3. Old coatings with good adhesion must be cleaned thoroughly. Poor adhering coatings must be removed, possibly spotted.

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

Application methods

Means of application / parameters	recommended nominal dry film thickness per working operation	Addition of thinner V-76
Roller coating / brush application	80 to 100 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.		
Airless spraying Nozzle diameter: 0.33 to 0.68 mm Material pressure: 150 to 250 bar	80 to 100 µm	up to 5 %

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-76

Drying times at a DFT of 80 µm and a temperature of 20 °C

Dry to touch:	After 2 to 3 hours
Tack free:	After approx. 8 to 10 hours
Ready for over-coating:	After several days

■ 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.

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