LACK– UND KUNSTSTOFF– CHEMIE GMBH

TECHNICAL INFORMATION

WIEREGEN-M94

Two-pack PUR top coating
High-solid
TL/TP-KOR-Stahlbauten, Blatt 94

■ FIELDS OF APPLICATION

Together with suitable primer and intermediate coatings as high-grade and colour-stable top coating for corrosion protection in protective coating systems of steel structures.

■ PRODUCT PROPERTIES

WIEREGEN-M94 contains a polyacrylate binder with a special polyisocyanate as curing agent.

Preferably, the material is applied by airless spraying, where a dry film thickness of 80 to 120 µm can be attained in one working operation. We recommend Airmix spraying for the coating of components with rough edges and for filigree parts. Brush application or roller coating (60 to 80 µm) is also possible, however in this case a specific surface texture will be obtained.

Capacities

Top coatings of WIEREGEN-M94 show excellent weather resistance and good colour stability. In this respect they are superior to the coatings usually applied on steel structures.

Together with suitable primer and intermediate coatings (see coating systems) a protective coating system will be obtained with both excellent mechanical resistance properties and stability against aggressive atmosphere, de-icing salt, etc.

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 94 and are subject to regular external control.

■ PRODUCT DATA

Product number	M94-E…. (depending on colour)	M94-S.... (depending on colour)
Colours	G+W MIO-colours	RAL-colours (other colours on demand)
Mixing ratio	9 : 1 with curing agent DX-10	7 : 1 with curing agent DX-10
Degree of gloss		satin glossy
Form of delivery	Brushable after mixture with curing agent	
Shelf life	At least 6 months in original cans at normal temperature	
Suitable thinner	V-89	

Theoretical parameters

WIEREGEN-M94, M94-S6005

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)
1.35	79	21	4.1	69	520
DFT (µm)	Calculated wet-film thickness (µm)	Consumption (kg/m²)		Spreading rate (m²/kg)	
80	115	0.154		6.5	

Theoretical parameters

WIEREGEN-M94, M94-E7602

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	85	15	3.6	71	420
DFT (µm)	Calculated wet-film thickness (µm)	Consumption (kg/m²)		Spreading rate (m²/kg)	
80	115	0.190		5.2	

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”)
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 or GEHOPON-E94-Primer	70 80
Intermediate coating	GEHOPON-E94-ZB	160
Top coating	WIEREGEN-M94	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.

■ INSTRUCTIONS FOR APPLICATION

Surface preparation Adhesion-reducing substances must be removed.

Air and surface temperature

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

We will recommend strongly a material heating if air, surface and material temperature are between 5 and 15 °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-89
Airless spraying Nozzle diameter: 0.38 to 0.58 mm Material pressure: 200 to 350 bar	80 to 120 µm	up to 3 %
Airmix spraying Nozzle diameter: 0.33 to 0.48 mm Material pressure: 175 to 250 bar Atomiser pressure 2 to 4 bar	80 to 120 µm	up to 3 %
Roller coating / brush application	60 to 80 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-89

Pot life

Approx. 4 hours (depending on temperature)

Curing and drying times

(At 80 µm dry film thickness and a temperature of approx. 20 °C)

Dry to touch: After 1.5 to 2 hours
Ready for over-coating: After 14 to 16 hours

■ 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.