LACK– UND KUNSTSTOFF– CHEMIE GMBH

TECHNICAL INFORMATION

WIEREGEN-DW18

Two-pack PUR-resin based top coating
- waterborne -

■ FIELDS OF APPLICATION

Together with suitable primer coatings as high-grade, colour-stable top-coating for corrosion protection of steel structures, e.g. in the range of engine construction.

■ PRODUCT PROPERTIES

WIEREGEN-DW18 contains a waterborne polyacrylate binder with a special polyisocyanate as curing agent.

Preferably, the material is applied by high-pressure air spraying, where a dry film thickness of 50 to 80 µm can be attained in one working operation. Application by brush or roller coating is recommended only for smaller areas.

Capacities

Top coatings of WIEREGEN-DW18 show excellent weather resistance and good colour stability.

Together with suitable primer coatings corrosion protection systems can be achieved with both excellent mechanical resistance and stability against aggressive atmosphere, de-icing salt, etc.

Temperature resistance (dry heat): 160 °C permanent
180 °C short term

Depending on the exposure time and the intensity of the colour, minor changes of the colour may occur.

Test certificates

Test certificate PB300/199/11 from 2012-04-03, IKS Dresden GmbH:

Based on this test certificates it will be confirmed that corrosion protection of the coating systems named on page 2 fulfill the requirements of TL/TP-KOR-Stahlbauten Blatt 87.

■ PRODUCT DATA

Product number	DW18-E…. (depending on colour)	DW18-F…. (depending on colour)
Colour	G+W-Eisenglimmer (MIO) colours	RAL colours (Other colours on request)
Mixing ratio	9 : 1 with DZ-18 as curing agent	9 : 1 with DZ-18 as curing agent
Degree of gloss		Flat
Shelf life	At least 6 months in original cans at normal temperature	
Suitable thinner	Demineralised water	

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Theoretical parameters

WIEREGEN-DW18, DW18-E5601

Density (g/mL)	Solid content (weight %)	VOC-content (weight %)	VOC-content per 10 µm DFT* (g/m²)	Solid content by (%)	Solid content by (mL/kg)
1.4	65	2.0	0.5	51	365
DFT (µm)	Calculated wet-thickness (µm)	Consumption (kg/m²)		Spreading rate (m²/kg)	
80	157	0.220		4.5	

WIEREGEN-DW18, DW18-F5015

Density (g/mL)	Solid content (weight %)	VOC-content (weight %)	VOC-content per 10 µm DFT* (g/m²)	Solid content by (%)	Solid content by (mL/kg)
1.35	64	2.0	0.5	52	385
DFT (µm)	Calculated wet-thickness (µm)	Consumption (kg/m²)		Spreading rate (m²/kg)	
80	154	0.208		4.8	

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 WB	140 g/l	< 140 g/l

Coating systems

Substrate	Steel	
Surface preparation	Blast-cleaning in surface preparation grade Sa 2 ½ in accordance with DIN EN ISO 12944-4	
	Product	**NDFT (µm)**
Primer coating	GEHOPON-EW18-Primer	80
Intermediate coating	GEHOPON-EW18-Intermediate in 1 to 2 working operations	80 to 160
Top coating	WIEREGEN-DW18	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

Coatings
Adhesion-reducing substances must be removed.

Air and surface temperature

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

Relative humidity

Optimal 40 to 60 %, 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 with the enclosed quantity of curing agent, preferably with a mechanical mixer.

Application methods

Means of application / parameters	recommended nominal dry film thickness per working operation	Addition of demineralised water
High pressure/air spraying Nozzle diameter: 1.5 to 1.8 mm Pressure: 4 to 5 bar Viscosity for application: 20 to 30 s DIN 53211/4 mm	80 µm	up to 3 %
Airless spraying Nozzle diameter: 0.33 to 0.58 mm Material pressure: 120 to 200 bar	80 µm	up to 3 %
Roller coating / brush application	40 to 60 µm	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

Coating material (liquid paint): With water
Surface-dried paint: With cleaning thinner V-407 or V-419

Let equipment soak only for a short time

Pot life

Approx. 2 hours at 20 °C (depending on temperature)

Curing and drying times

At a temperature of 20 °C and 50 % rel. humidity

Dry to touch: After 50 minutes
Tack free: After 3 to 4 hours
Ready for over-coating: After 12 hours
Processable: After 16 to 24 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.