LACK– UND KUNSTSTOFF– CHEMIE GMBH

TECHNICAL INFORMATION

WIEREGEN-C165R

2C-PUR Monolayer, quick curing, ESTA

■ FIELDS OF APPLICATION

Two-pack protective coating with high mechanical resistance for steel structures, machines, valves, apparatus construction preferably for indoor use.
At low corrosion stresses (categories C1, C2 and C3-Medium according to DIN EN ISO 12944-2) with a nominal dry film thickness of 100 µm.

■ PRODUCT PROPERTIES

WIEREGEN-C165R is a satin glossy two-pack protective coating (monolayer), based on a polyurethane binder. The material cures quickly at normal temperature. The material is preferably applied by airless-/ airmix spraying or the respective electrostatic methods.

Capacities

Together with suitable primer and if necessary intermediate coatings protective coating systems will be obtained with excellent resistance properties in areas with high humidity or aggressive atmosphere and against different chemicals.

■ PRODUCT DATA

	WIEREGEN-C165R	Curing agent
Product number	C165R-S.... (depending on colour)	DX-14
Colour	RAL colours (Other colours on request)	
Mixing ratio	9.6 parts by weight	1 part by weight

The material can also be applied by plural component application systems. Please feel free for our technical advice.

Degree of gloss satin glossy

Form of delivery Ready for application after mixture with curing agent

Shelf life At least 24 months in original cans at normal temperature

Suitable thinner Thinner V-89, V-560, V-562

Theoretical parameters

WIEREGEN-C165R, C165R-S9018

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)
1.50	72	28	8.2	52	345
DFT (µm)	Calculated wet-film thickness (µm)	Consumption (kg/m²)		Spreading rate (m²/kg)	
60	115	0.175		5.7	

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)**
Single-layer protective coating	WIEREGEN-C165R	80 - 100

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	WIEREGEN-ACU-Metallgrund, M4-702 or GEHOPON-EW19-Metallgrund	60
Top coating	WIEREGEN-C165R	60

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

Steel surfaces
Blast-cleaning in accordance with EN ISO 12944-4, surface preparation grade Sa 2 ½, roughness grade medium (G) according to EN ISO 8503/1 (Reference Comparator to ISO 8503/1 GRIT G201, Segment 2 and up to 3).

Hot-dip-galvanised steel surfaces and aluminium:
Dry and clean surfaces are essential for good adhesion of coating materials. Besides contaminants like grease, oil, dust, etc. especially salts and oxides (zinc/aluminium corrosion products) have to be removed totally. For building 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 mat surface. Roughness grade fine up to medium (G) according to EN ISO 8503/1 (Reference Comparator to ISO 8503/1 GRIT G201, Segment 2).
Remark: Salts and oxides are forming relatively quickly 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
Airless spraying Nozzle diameter: 0.38 to 0.68 mm Material pressure: 150 to 250 bar	60 - 80 µm	up to 2 %
Airmix spraying Nozzle diameter: 0.33 to 0.48 mm Material pressure: 100 to 150 bar Atomiser pressure: 1,5 to 2,0 bar	60 - 80 µm	up to 2 %
High pressure/air spraying Nozzle diameter: 1.3 to 1.8 mm Air pressure: 3 to 4 bar	60 µm	up to 2 %

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-562

Pot life

4 to 6 hours (depending on temperature)

Drying and curing times
Drying stage in accordance with DIN 53150 at 100 µm DFT

Air temperature	+ 20 °C
Drying stage 1 (dry to touch)	≤ 45 min.
Drying stage 3 (tack free)	3 - 4 h
Drying stage 6 (ready for re-coating)	7 - 8 h

The curing of WIEREGEN-C165R can be accelerated by using higher temperatures e.g.: 20 minutes drying at 80 °C
(related to a DFT of 100 µm)

■ 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.