

# Technical Data Sheet

## HYDROGUARD® Zinc 81

Serie 160511

### PRODUCT DESCRIPTION

HYDROGUARD Zinc 81 is a two components water based zinc rich epoxy primer in accordance to regulatory SSPC Paint 20 level 2. Contains 81% by weigh of zinc powder in dry film thickness. Is supplied with zinc dust ASTM D520 Type III.

### INTENDED USES

Particularly suitable as a high performance anticorrosive primer for particularly aggressive environments such as offshore structures, chemical and petrochemical plants, bridges. Can be used as primer in protective systems up to CX class in accord to standard ISO 12944. Not to be overcoated with alkyds. This product contributes to the Green Buildings standard credits for LEED certification.

### TECHNICAL INFORMATION

Product type	Zinc rich water based epoxy primer			
Colours	Grey			
Solids (% +/- 2)	60 (by Volume)	85 (by Weight)	SOV/VOC (g/liter)	<175 Directive 2004/42/CE
Specific Gravity (g/liter +/- 100)	2490		SOV/VOC (g/liter) (calculated)	<175 Directive 2010/75/CE
Flash Point (°C +/- 2)	>21			
Appearance	matt			
Temperature Resistance (°C)	100 (dry) - 120 (peak)			

### APPLICATION DATA

Application Range (min - max) Typical	Film thickness per coat in micron		Theoretical spreading rate		Consumption
	Dry	Wet	m <sup>2</sup> /l	m <sup>2</sup> /kg	g/m <sup>2</sup>
	50 - 100	84 - 167	12 - 6	4.8 - 2.4	-
	<b>60</b>	<b>100</b>	<b>10</b>	<b>4</b>	<b>250</b>

Room Temperature	min 10°C	Max 40°C	Relative Humidity	min 5%	Max 80%
Mixing Ratio	4 - 1 (by weight)		1.14 - 1 (by volume)		
Pot life	4 h				
Thinner/Cleaner	clear water (dilution 7-8% max. by weight) depending on the required thickness and application conditions				

Application methods  
Airless or conventional spray, brush (only for stripe coating).  
NOTE: mix for at least 2 minutes all the Comp. A and all the Comp. B separately, with the help of a mixer. Then catalyze the Comp. A with the Comp. B and mix mechanically until a completely homogeneous mixture. Only after the homogenization of the mixture add the dilution water. Pass the mixture through a sieve of 50 meshes.  
Continuously stir the paint at low speed during application.

### Guideline for airless spray

Pressure at nozzle	15 Mpa (150 kp/cm <sup>2</sup> , 2100 psi)
Nozzle tip	0,46 - 0,58 mm (0,018 - 0,023)

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**SURFACE PREPARATION**

the substrate must be clean and dry. Surface contamination is to be removed by detergents and fresh water cleaning. Blast cleaning to min. Sa 2, power tool cleaning to min. St 2. Improved surface treatment (blast cleaning to Sa 2,5) will improve the performance.

**CONDITION DURING APPLICATION**

the temperature of the substrate should be min. 10°C and min. 3°C above the dew point of the air. The temperature and relative humidity should be measured in the vicinity of the substrate.

**DRYING TIMES**

Drying times are generally related to air circulation, temperature, film thickness and number of coats, and will be affected correspondingly. The figures given in the table are typical with: good ventilation (outdoor exposure or free circulation of air), recommended film thickness, one coat on top of inert substrate.

Substrate temperature	Surface Dry <sup>1</sup>	Hard Dry <sup>2</sup>	Cured <sup>3</sup>	Dry to recoat <sup>4</sup>	
				minimum <sup>5</sup>	Maximum <sup>6</sup>
10°C		1.5 - 2 h	48 h	6 h	-
20°C		45 min. - 1 h	48 h	4 h	-
30°C		30 min.	24 h	2 h	-

- 1
- 2 Data resulted by tests and experience in pratical applications. A good ventilation can improve the drying time.
- 3 Data resulted by tests and experience in pratical applications.
- 4 Recommended data given for recoating with same generic type of paint.
- 5 In case of multi-coat application, drying times will be influenced by the number in sequence and by the total thickness of previous coat applied.
- 6 The surface should be dry and free from any contamination prior to application of the subsequent coat.

Given data must be considered as guidelines only. Actual drying time can only be decided at site, depending on age of existing system, generic types, numbers of coates, thinning, temperature, ventilation, etc.

**THIS PRODUCT IS INTENDED FOR PROFESSIONAL USE ONLY**

The applicators and operators shall be trained, experienced and have the capability and equipment to mix/stir and apply the coatings correctly and according to Ti.Pi.Ci.'s technical documentation.

**STORAGE AND PACKAGING**  
**STORAGE**

the product should be stored in accordance with national regulations. The best storage conditions are to keep the packages in a dry space provided with adequate ventilation.

**SHELF LIFE** 6 months at room temperature.  
**PACKAGING** 16 kg comp. A and 4 kg comp. B (20 kg KIT A+B)

**HEALTH AND SAFETY**

**For detailed information on the health and safety hazards and precautions for the use of this product, we refer to the Material Safety Data Sheet.**

**Disclaimer**

*The information in this data sheet is given to the best of our knowledge based on laboratory testing and practical experience. However, as the product is often used under contitions beyond our control, we can not guarantee anything but the quality of the product itself. We reserve the right to change the given data without notice.*