

# Technical Data

## Resist 65



### Product description

Resist 65 is a two-component, solvent based inorganic zinc-rich ethyl silicate primer that complies with the compositional requirements of SSPC Paint 20 level 3. This product is supplied with ASTM D520 Type II zinc dust.

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### Recommended use

A zinc primer that provides excellent protection to steel substrates exposed to corrosive environment. It can be used as the first coat in a multiple layer system for long term protection.

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### Film thickness and spreading rate

	Minimum	Maximum	Typical
Film thickness, dry ( $\mu\text{m}$ )	50	90	75
Film thickness, wet ( $\mu\text{m}$ )	70	125	104
Theoretical spreading rate ( $\text{m}^2/\text{l}$ )	14,4	8	9,6

### Comments

There is a risk of mud-cracking if the thickness exceeds 120  $\mu\text{m}$ .

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### Physical properties

Colour	Grey
Solids (vol %)*	72 $\pm$ 2
Flash point	16°C $\pm$ 2 (Setaflash)
VOC	416 gms/ltr UK-PG6/23(97). Appendix 3
Gloss	Flat
Water resistance	Very good
Abrasion resistance	Excellent
Solvent resistance	Excellent
Chemical resistance	Excellent within pH-range 6-10
Flexibility	Limited

\*Measured according to OCCA Monograph No. 4

Hong Kong rules: Category of paints - Inorganic zinc coatings; VOC 338 gms/ltr HK EPD method (Ready to use); Exempt compound - N/A; Specific gravity: 2.37 (A+B); Both VOC and Specific gravity values provided are typical values, subject to changes when different colour involved.

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## Surface preparation

All surfaces should be clean, dry and free from contamination. The surface should be assessed and treated in accordance with ISO 8504.

### Bare steel

Cleanliness: Blast cleaning to Sa 2½ (ISO 8501-1:2007). Roughness: using abrasives suitable to achieve grade Fine to Medium G (30-85 µm, Ry5) (ISO 8503-2)

### Other surfaces

The coating may be used on other substrates. Please contact your local Jotun office for more information.

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## Condition during application

The temperature of the substrate should be min. 5°C and at least 3°C above the dew point of the air, temperature and relative humidity measured in the vicinity of the substrate. Zinc silicate paints in general requires moisture for curing. At low humidity the curing will be improved by gently sprinkling fresh water over the paint film, and/or by artificial humidification of the surrounding atmosphere. The paint must be completely cured before topcoating, otherwise the adhesion of the subsequent coat will be unsatisfactory. Use Methyl ethyl ketone (MEK) test according to ASTM D 4752-87 to verify the curing time before topcoating. Unweathered zinc silicate films are porous and the porosity may vary according to the weather condition during application and the application technique. When overcoating, the air in the pores will escape through the new coat of paint and may cause blisters or pinholes ("popping") in the coat just after application. To avoid this a mist coat/full coat technique is recommended:

First apply a thin coat to fill the pores in the zinc silicate film and a few minutes later apply to full specified film thickness. In difficult cases it may be necessary to thin the next coat, or use Penguard Tie Coat 100 as first overcoat.

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## Application methods

<b>Spray</b>	Use airless spray or conventional spray
<b>Brush</b>	Recommended for stripe coating and small areas, care must be taken to achieve the specified dry film thickness. In order to avoid settling of heavy zinc, continuous mechanical stirring during application is recommended.

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## Application data

<b>Mixing ratio (volume)</b>	9:2
<b>Mixing</b>	Comp A is a liquid and Comp B is dry zinc dust. Consists of 9 litres Resist 65 Comp A and 14.2 kg/2L Resist 65 Comp B. Pour the zinc dust slowly into the liquid during mechanical mixing. The Comp A must be well shaken before use. Stir until lump free and pass through a 60 mesh sieve.
<b>Pot life (23°C)</b>	5 hours. (Reduced at higher temp.)
<b>Thinner/Cleaner</b>	Jotun Thinner No. 4/25. Adjusting spray pattern and drying may sometimes become necessary. Use max 5% *, Jotun Thinner No. 4 (fast evaporation) when temperature is low and Jotun Thinner No. 25 (slow evaporation) when temperature is high.
<b>Guiding data airless spray</b>	
<b>Pressure at nozzle</b>	10 MPa (100 kp/cm <sup>2</sup> , 1400 psi)
<b>Nozzle tip</b>	0.46-0.58 mm (0.018-0.023")
<b>Spray angle</b>	30-80°
<b>Filter</b>	Check to ensure that filters are clean.
<b>Note</b>	* Thinner should be added after mixing components.

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## Drying time

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)
- \* Typical film thickness
- \* One coat on top of inert substrate
- \* Relative humidity at 70%

Substrate temperature	5°C	10°C	23°C	40°C
Surface dry	1 h	30 min	15 min	10 min
Through dry	2 h	1 h	30 min	20 min
Cured <sup>1</sup>	84 h	42 h	18 h	10 h
Dry to recoat, minimum <sup>2</sup>	84 h	42 h	18 h	10 h
Dry to recoat, maximum <sup>3</sup>				

1. Curing time to be verified by MEK test (ASTM D 4752-87).
1. Recommended data given for recoating with coatings normally specified on top of zinc ethyl silicate coatings.
2. The surface should be free of zinc salts and other contamination prior to application.

The given data must be considered as guidelines only. The actual drying time/times before recoating may be shorter or longer, depending on film thickness, ventilation, humidity, underlying paint system, requirement for early handling and mechanical strength etc. A complete system can be described on a system sheet, where all parameters and special conditions could be included.

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## Typical paint system

**Resist 65**                      **1 x 75 µm**                      **(Dry Film Thickness)**

Normally overcoated with an epoxy system.

**Other systems may be specified, depending on area of use**

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## Storage

The product must be stored in accordance with national regulations. Storage conditions are to keep the containers in a dry, cool, well ventilated space and away from source of heat and ignition. Containers must be kept tightly closed. The component A must be stored below 25°C. The product component B is zinc dust and has no strict limitations for storage. SHELF LIFE: 8 months at 23°C for Comp. A, 4 years for comp. B, subject to re-inspection thereafter. Higher temperatures during storage may reduce the shelf life and may lead to gelling in the tin.

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## Handling

Handle with care. Stir well before use. Continuous stirring during application will prevent the heavy zinc pigment from settling.

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## Packing size

11 litres unit: 9 litres Resist 65 Comp A in a 10 litre container and 14.2 kg/2 litres Resist 65 Comp B in a 20 litre container.

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## Health and safety

Please observe the precautionary notices displayed on the container. Use under well ventilated conditions. Do not breathe or inhale mist. Avoid skin contact. Spillage on the skin should immediately be removed with suitable cleanser, soap and water. Eyes should be well flushed with water and medical attention sought immediately.

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

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### 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 can be used under conditions beyond our control, we can only guarantee the quality of the product itself. We also reserve the right to change the given data without notice. Minor product variations may be implemented in order to comply with local requirements.

If there is any inconsistency in the text the English (UK) version will prevail.

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