

## Resist 86

### Product description

This is a two component moisture curing inorganic zinc ethyl silicate coating. It is a fast curing, very high zinc dust containing product. It conforms to the compositional requirements of SSPC paint 20, level 1, ISO 12944-5 and AS/NZS 3750.15 1994. It provides excellent corrosion protection as a single coat or as part of a complete coating system. It is heat resistant up to 540 °C. To be used as primer in a coating system and as single coat system in atmospheric environments. Suitable for properly prepared carbon steel substrates only. This product complies with ASTM D520 type II zinc dust.

### Typical use

Protective:

Suitable for structural steel and piping to be exposed to highly corrosive environments, C5I or C5M (ISO 12944-2). Recommended for offshore environments, refineries, power plants, bridges, buildings, mining equipment and general structural steel. Specially designed as a primer in coating systems where extended durability is required.

### Approvals and certificates

Pre-qualification testing in accordance with NORSOK M-501, Rev. 5, System 1, suitable for exterior exposure in offshore environment, below 120 °C.

Tested by independent institute for static coefficient of friction.

Additional certificates and approvals may be available on request.

### Colours

greenish grey, grey

### Product data

| Property              | Test/Standard                          | Description |
|-----------------------|----------------------------------------|-------------|
| Solids by volume      | OCCA Monograph No. 4                   | 67 ± 2 %    |
| Gloss level (GU 60 °) | ISO 2813                               | matt (0-35) |
| Flash point           | ISO 3679 Method 1                      | 14 °C       |
| Density               | calculated                             | 2,63 kg/l   |
| VOC-US/Hong Kong      | US EPA method 24 (tested)              | 455 g/l     |
| VOC-EU                | IED (2010/75/EU) (calculated)          | 510 g/l     |
| VOC-China             | GB/T 23985-2009 (ISO 11890-1) (tested) | 467 g/l     |

The provided data is typical for factory produced products, subject to slight variation depending on colour.

All data is valid for mixed paint.

Gloss description: According to Jotun Performance Coatings' definition.

## Film thickness per coat

### Typical recommended specification range

|                            |            |                   |
|----------------------------|------------|-------------------|
| Dry film thickness         | 50 - 90    | µm                |
| Wet film thickness         | 75 - 135   | µm                |
| Theoretical spreading rate | 13,4 - 7,4 | m <sup>2</sup> /l |

## Surface preparation

To secure lasting adhesion to the subsequent product all surfaces shall be clean, dry and free from any contamination.

### Surface preparation summary table

| Substrate    | Surface preparation                                                     |                                                                         |
|--------------|-------------------------------------------------------------------------|-------------------------------------------------------------------------|
|              | Minimum                                                                 | Recommended                                                             |
| Carbon steel | Sa 2½ (ISO 8501-1) with a surface profile Fine to Medium G (ISO 8503-2) | Sa 2½ (ISO 8501-1) with a surface profile Fine to Medium G (ISO 8503-2) |

## Application

### Application methods

The product can be applied by

|        |                                                                                                                                                                                                                             |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Spray: | Use air spray or airless spray.                                                                                                                                                                                             |
| Brush: | 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. |

### Product mixing ratio (by volume)

|                       |             |
|-----------------------|-------------|
| Resist 86 Comp A      | 8 part(s)   |
| Jotun Zinc 100 Comp B | 2,6 part(s) |

Component A is a liquid and Component B is dry zinc dust. Component A must be well shaken before use. Pour the zinc dust slowly into the liquid during mechanical mixing. Stir until lump free and pass through a 60 mesh sieve.

### Thinner/Cleaning solvent

Thinner: Jotun Thinner No. 4 / Jotun Thinner No. 25

Thinning max.: 5 %

Jotun Thinner No. 4: for fast evaporation.  
Jotun Thinner No. 25: for slow evaporation.

### Guiding data for airless spray

Nozzle tip (inch/1000): 17-21

Pressure at nozzle (minimum): 100 bar/1400 psi

## Drying and Curing time

| Substrate temperature     | 5 °C  | 10 °C  | 23 °C  | 40 °C  |
|---------------------------|-------|--------|--------|--------|
| Surface (touch) dry       | 1 h   | 30 min | 15 min | 13 min |
| Walk-on-dry               | 1.5 h | 45 min | 30 min | 25 min |
| Dry to over coat, minimum | 18 h  | 13 h   | 4 h    | 1.5 h  |
| Dried/cured for service   | 18 h  | 13 h   | 4 h    | 1.5 h  |

Drying and curing times are determined under controlled temperatures and relative humidity below 85 %, and at average of the DFT range for the product.

The given drying and curing times, as well as over coating intervals for inorganic zinc ethyl silicates are measured at relative humidity (RH) 80 % during application and curing. An even higher RH will increase the curing speed. The paint requires continuous RH above 50 % to cure.

Surface (touch) dry: The state of drying when slight pressure with a finger does not leave an imprint or reveal tackiness.

Walk-on-dry: Minimum time before the coating can tolerate normal foot traffic without permanent marks, imprints or other physical damage.

Dry to over coat, minimum: The shortest time allowed before the next coat can be applied.

Dried/cured for service: Minimum time before the coating can be permanently exposed to the intended environment/medium.

## Induction time and Pot life

| Paint temperature | 23 °C |
|-------------------|-------|
| Pot life          | 8 h   |

## Heat resistance

|                  | Temperature |        |
|------------------|-------------|--------|
|                  | Continuous  | Peak   |
| Dry, atmospheric | 400 °C      | 540 °C |

This product can withstand a peak temperature of 540 °C (1000 °F) for a longer period as well. A continuous temperature above 400 °C will however affect the long term performance of an inorganic zinc silicate coating.

Peak temperature duration max. 1 hour.

The temperatures listed relate to retention of protective properties. Aesthetic properties may suffer at these temperatures.

Note that the coating will be resistant to various immersion temperatures depending on the specific chemical and whether immersion is constant or intermittent. Heat resistance is influenced by the total coating system. If used as part of a system, ensure all coatings in the system have similar heat resistance.

## Product compatibility

Depending on the actual exposure of the coating system, various primers and topcoats can be used in combination with this product. Some examples are shown below. Contact Jotun for specific system recommendation.

Subsequent coat: epoxy, silicone acrylic

## Packaging (typical)

|                       | Volume<br>(litres) | Size of containers<br>(litres) |
|-----------------------|--------------------|--------------------------------|
| Resist 86 Comp A      | 8                  | 10                             |
| Jotun Zinc 100 Comp B | 2.6                | 20                             |

The volume stated is for factory made colours. Note that local variants in pack size and filled volumes can vary due to local regulations.

## Storage

The product must be stored in accordance with national regulations. Keep the containers in a dry, cool, well ventilated space and away from sources of heat and ignition. Containers must be kept tightly closed. Handle with care.

### Shelf life at 23 °C

|                       |             |
|-----------------------|-------------|
| Resist 86 Comp A      | 6 month(s)  |
| Jotun Zinc 100 Comp B | 48 month(s) |

In some markets commercial shelf life can be dictated shorter by local legislation. The above is minimum shelf life, thereafter the paint quality is subject to re-inspection.

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## Caution

This product is 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 Jotun's technical documentation. Applicators and operators shall use appropriate personal protection equipment when using this product. This guideline is given based on the current knowledge of the product. Any suggested deviation to suit the site conditions shall be forwarded to the responsible Jotun representative for approval before commencing the work.

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## Health and safety

Please observe the precautionary notices displayed on the container. Use under well ventilated conditions. Do not inhale spray 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.

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## Colour variation

When applicable, products primarily meant for use as primers or antifoulings may have slight colour variations from batch to batch. Such products may fade and chalk when exposed to sunlight and weathering.

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## Disclaimer

The information in this document is given to the best of Jotun's knowledge, based on laboratory testing and practical experience. Jotun's products are considered as semi-finished goods and as such, products are often used under conditions beyond Jotun's control. Jotun cannot guarantee anything but the quality of the product itself. Minor product variations may be implemented in order to comply with local requirements. Jotun reserves the right to change the given data without further notice.

Users should always consult Jotun for specific guidance on the general suitability of this product for their needs and specific application practices.

If there is any inconsistency between different language issues of this document, the English (United Kingdom) version will prevail.

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