Technical Data
Resist 86

Jotun Protects Property

Product description
Resist 86 is a two-pack, quick curing zinc rich ethyl silicate coating that complies with the compositional requirements for SSPC Paint 20 level 1 and ISO 12944. Resist 86 is supplied with ASTM D520 Type II zinc dust.

Recommended use
A general purpose, heavy duty, anti-corrosive primer:
1. As the first coat in a multiple layer system.
2. As a single coating for long term protection of steel exposed to moderately to severely corrosive environment. Resistant to cyclic dry temperatures up to 400°C.

Film thickness and spreading rate

	Minimum	Maximum	Typical
Film thickness, dry (µm)	50	90	75
Film thickness, wet (µm)	75	135	115
Theoretical spreading rate (m^2/l)	13,4	7,4	8,9

Comments
There is a risk of mud-cracking if the film thickness exceeds 120µm.

Physical properties

Colour	Greenish grey, Grey
Solids (vol %)*	67 ± 2
Flash point	14ºC ± 2 (Setaflash)
VOC	465 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 455 gms/ltr HK EPD method (Ready to use); Exempt compound - N/A; Specific gravity: 2,63 (A+B); Both VOC and Specific gravity values provided are typical values, subject to changes when different colour involved.

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.

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.

Application methods

Spray	Use airless spray or conventional 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.

Application data

Mixing ratio (volume)	8:2,6
Mixing	Comp. A is a liquid and Comp. B is dry zinc dust. Consists of 8 litres Comp. A and 18.5 kg/2,6L Jotun Zinc 100, 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.
Pot life (23°C)	8-12 hours. (Reduced at higher temp.)
Thinner/Cleaner	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. Thinner should be added after mixing of components

Guiding data airless spray

Pressure at nozzle	10 MPa (100 kg/cm², 1400 psi)
Nozzle tip	0.46-0.58 mm (0.018-0.023")
Spray angle	30-80º
Filter	Check to ensure that filters are clean.

Note

*Thinner should be added after mixing components.

Stripe coating / touch up should be done after the full coat is applied, not before. If done before, the full coat must be applied immediately afterwards, wet on wet. One shall aim at obtaining the specified Dry Film Thickness on all areas during the full coat application.

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 of 80%

Substrate temperature	**5°C**	**10°C**	**23°C**	**40°C**
Surface dry	60 min	30 min	15 min	13 min
Through dry	90 min	45 min	30 min	25 min
Cured [1]	18 h	13 h	4 h	1,5 h
Dry to recoat, minimum [2]	18 h	13 h	4 h	1,5 h
Dry to recoat, maximum [3, 4]				

1. Curing time to be verified by MEK test (ASTM D 4752-87) and coin test: Scrape the coating fiercely with a coin. A shining metallic lustre with no loose zinc indicates a fully cured coating.
2. Recommended data given for recoating with epoxy. Resist 86 shall not be overcoated with itself.
3. Touch up with itself should be thinned 15% with Jotun Thinner no. 25.
4. Provided the surface is free from zinc salts and other contamination there is normally no touch up overcoating time limit. Best intercoat adhesion occurs, however, when the touch up coat is applied before the preceding coat has dried.

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.

Typical paint system

Resist 86 **1 x 75 µm** **(Dry Film Thickness)**
Normally overcoated with an epoxy system.

Other systems may be specified, depending on area of use

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 limitation's for storage. SHELF LIFE: 6 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.

Handling

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

Packing size

10,6 litres unit: 8 litres Resist 86 Comp A in a 10 litre container and 18,5 kg/2,6 litres Jotun Zinc 100, Comp B (previously named Resist 78/86, Comp B) in a 20 litre container.

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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THIS DATA SHEET SUPERSEDES THOSE PREVIOUSLY ISSUED