

Technical Data

Resist 5 WF



Product description

Resist 5 WF is a two-pack, self-curing, water borne inorganic zinc rich silicate primer which can be applied in high film thickness. Resist 5 WF complies with the compositional requirements for SSPC Paint 20 level 1 and ISO 12944. Can also be made to order with ASTM D520 Type II zinc dust. Resist 5 WF also conforms to the AS/NZS 3750.15 standard for inorganic zinc silicate paint.

Recommended use

A general purpose, heavy duty, anti-corrosive primer:

1. As the first coat in a multiple layer system with water borne coatings, as well as with suitable solvent borne coatings, such as epoxy and others - not to be overcoated with alkyds.
2. As a single coating for long term protection of the interior of steel tanks. A separate resistance list is available.
3. As a single coat system for atmospheric service including marine locations.

Film thickness and spreading rate

	Minimum	Maximum	Typical	Typical tank lining services:
Film thickness, dry (μm)	50	200	75	125
Film thickness, wet (μm)	67	267	100	170
Theoretical spreading rate (m^2/l)	15	3,75	10	6,0

Comments

There is a risk of mud cracking if the dry film thickness exceeds 250 μm

Physical properties

Colour	Grey
Solids (vol %)*	75 \pm 2
Flash point	Non flammable
Gloss	Flat
Water resistance	Very good
Abrasion resistance	Excellent
Solvent resistance	Excellent
Chemical resistance	Excellent within pH range of 6-10
Flexibility	Limited

*Measured according to ISO 3233:1998 (E)

VOC: 0 g/l (Actual).

Metallic zinc content is 88 w% (in dry coating) measured in accordance to AS1580.504.1.

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 (30-50 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 minimum 10°C and at least 3°C above the dew point of the air, temperature and relative humidity measured in the vicinity of the substrate. Good ventilation is usually required in confined areas to ensure proper drying. Relative humidity during application and drying should be maximum 85% and if possible avoid application at relative humidity below (30%) due to risk of dry spraying. To avoid pinholes (popping) in subsequent coat when overcoating porous zinc silicate films, first apply a thin coat (mist coat) to fill the pores, wait 3-5 minutes to let air in the pores escape and then apply to full specified film thickness. In difficult cases the mist coat can be thinned.

Application methods

- Spray** Conventional spray (such as De Vilbiss - JGA-gun with zinc conversion kit. Can also be applied with airless spray. (For example, Wiwa high pressure pump R/F/W-G-34020 or Speeflow Commander Z).
- Brush** Recommended for stripe coating and small areas, care must be taken to achieve the specified dry film thickness.
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Application data

- Mixing ratio (volume)** 26 kg (3.75 litre) Comp. B (Zinc powder) to be sifted slowly into 7,3 kg (6.25 litre) Comp. A (Silicate solution) and mixed thoroughly. It is recommended to pass the mixture through a 60 mesh sieve before use.
- Pot life (23°C)** 5 hours. (Reduced at higher temp.)
- Thinner/Cleaner** Fresh water, but usually no thinning.
- Note** During painting it is necessary to continuously stir the paint with a mechanical stirrer. To ensure maximum adhesion and film integrity if a second coat of Resist 5 WF is to be applied it should contain an additional 60 ml of Resist 5 WF, Comp. A (silicate solution) per mixed litre of material.
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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 $\leq 70\%$

Substrate temperature	10°C	23°C	40°C
Surface dry	40 min	15 min	10 min
Through dry	120 min	45 min	20 min
Cured	10 d	5 d	3 d
Dry to recoat, minimum	24 h	8 h	5 h

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 5 WF	1 x 75 µm	(Dry Film Thickness)
WaterFine Special	2 x 60 µm	(Dry Film Thickness)
WaterFine Topcoat	1 x 50 µm	(Dry Film Thickness)

FOR INTERIOR OF TANKS OR SINGLE COAT SYSTEM:

Resist 5 WF	1 x 125 µm	(Dry Film Thickness)
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Other systems may be specified, depending on area of use

Complete curing:

Curing of Resist 5 WF to be evaluated by coin test and water-insolubility test. Please contact your local Jotun office for more information on the above test methods.

When the Resist 5 WF is used as a one coat system for the interior of tanks the paint must be completely cured before the tank is put into service. In order to achieve this the following procedures can be used:

- Apply 125 µm Resist 5 WF.
- Let the paint dry/cure with good ventilation and low humidity until minimum recoating time is reached.
- Spray water (seawater is preferred) on the coating and leave the tank closed. Repeat the water spraying 3 - 4 times during a 48 hours period.
- Remove the water and let the tank dry.

Procedure for preparation and cleaning of application equipment:

To avoid solvent contamination of the water borne paint the spraying equipment has to be conditioned before use. All equipment containing solvents in the pump, hoses and gun have to be thoroughly cleaned according to the following instructions.

If the application equipment is made in stainless steel, designed for and only used for application of water borne coatings this preparation and cleaning procedure is not needed.

Before spraying:

Circulate Jotun Thinner No. 17 through the equipment and hoses. Then Jotun Thinner No. 4 before fresh clean water.

After spraying:

Clean the equipment and hoses with water and detergent, then circulate Jotun Thinner No. 4 and finally Jotun Thinner No. 17.

Storage

The product must be stored below 25°C and 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 and kept from freezing. Storage at elevated temperature will significantly reduce the product shelf life. SHELF LIFE: Component A, 2 years; component B, 1 year.

Handling

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

Packing size

7,3 kg Comp. A , 26 kg Comp. B (Together 10 l paint)

Packing may vary from country to country according to local requirements.

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.

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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