

Technical Data

RESIST 78



Product description

Resist 78 is a two-pack, moisture curing, ethyl silicate based zinc-rich coating. Resist 78 meets Aramco specifications 09-AMSS-071 tested according to SSPC 20.

Recommended use

Protection of blast-cleaned steel. Normally used in combination with an epoxy for optimum protection against corrosion. May withstand temperatures up to 400°C.

Film thickness and spreading rate

	Minimum	Maximum	Typical
Film thickness, dry (µm)	50	90	75
Film thickness, wet (µm)	70	130	107
Theoretical spreading rate (m ² /l)	14	7.8	9.3

Comments

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

Physical properties

Colour	Grey
Solids (vol %)*	70 ± 2
Flash point	14°C ± 2 (Setaflash)
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 ISO 3233:1998 (E)

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 8501-1:1988). 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)	Comp. A is a liquid and Comp. B is dry zinc powder. Consists of 10 ltr A plus 18.5 Kg. Comp. B (together 12.6 ltr paint). Pour the zinc powder 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 hours. (Reduced at higher temp.)
Thinner/Cleaner	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.
Guiding data airless spray	
Pressure at nozzle	10 MPa (100 kp/cm ² , 1400 psi)
Nozzle tip	0.46-0.58 mm (0.018-0.023")
Spray angle	30-80°
Filter	Check to ensure that filters are clean.
Note	* Thinner should be added after mixing components.

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	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				

1. Curing time to be verified by MEK test (ASTM D 4752-87)
2. Recommended data given for recoating with coatings normally specified on top of zinc ethyl silicate coatings.
3. 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.

Typical paint system

Resist 78 1 x 75 µm (Dry Film Thickness)

Overcoat with an epoxy system.

Other systems may be specified, depending on area of use

Storage

The component A must be stored below 25°C and in accordance with national regulations, subject to re-inspection thereafter. Storage conditions are to keep the containers in a dry, cool, well ventilated space and away from source of heat and ignition. The product component B is zinc dust and has no strict limitation's for storage. Containers must be kept tightly closed.

Handling

SHELF LIFE: 6 months at 23°C for Comp. A. , 4 years for comp. B. Higher temperatures during storage may reduce the shelf life and may lead to gelling in the tin. Handle with care. Stir well before use. Continuous stirring during application will prevent the heavy zinc pigment from settling.

Packing size

10 L. Comp. A, 18.5 Kg. Comp. B. (Together 12.6 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 is often used under conditions beyond our control, we cannot guarantee anything but the quality of the product itself. We reserve the right to change the given data without notice.

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