

Technical Data

RESIST GTI



Product description

Resist GTI is a two-pack, moisture curing, ethyl silicate based zinc-rich coating. Can also be made to order with ASTM D520 Type II zinc dust.

Recommended use

Protection of blast-cleaned steel. Normally used in combination with an epoxy or a vinyl system for optimum protection against corrosion. Resist GTI can also be used alone for protection of chemical tanks. A separate resistance list is available. May withstand temperatures up to 400°C.

Film thickness and spreading rate

	Minimum	Maximum	Typical
Film thickness, dry (µm)	50	100	75
Film thickness, wet (µm)	85	165	125
Theoretical spreading rate (m ² /l)	12	6	8

Comments

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

Physical properties

Colour	Greenish grey
Solids (vol %)*	60 ± 2
Flash point	16°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.

Application data

Mixing ratio (volume) 28.5 kg Comp. B (zinc powder) to be poured slowly into 10 litres Comp. A (Base) during mechanical mixing. 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

Guiding data airless spray

Pressure at nozzle 10 MPa (100 kp/cm² 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 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.

REMARKS: 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 80%

Normal hardener	5°C	10°C	23°C	40°C
Substrate temperature				
Surface dry	60 min	30 min	15 min	13 min
Through dry	90 min	45 min	30 min	25 min
Cured ¹	36 h	24 h	12 h	7 h
Dry to recoat, minimum ²	36 h	24 h	12 h	7 h

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.

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

When overcoated:

Resist GTI 1 x 75 µm (Dry Film Thickness)
Topcoat with an epoxy or a vinyl system.

For interior of tanks:

Resist GTI 1 x 100 µm (Dry Film Thickness)

Other systems may be specified, depending on area of use

COMPLETE CURING :

When Resist GTI is used as a one coat system for the interior of tanks the paint must be completely cured. In order to achieve this the following procedures can be used:

- ÿ Apply 100 µm Resist GTI
 - ÿ Let the paint dry/cure with good ventilation and low humidity for 4 hours
 - ÿ Then let the paint cure at high humidity and preferably at high temperature. Curing is to be verified by MEK-test (ASTM D 4752-87)
 - ÿ 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
 - ÿ Remove the water and let the tank dry
 - ÿ Check the curing by scraping the coating with a coin. The coin shall produce a shiny mark without any loosened zinc
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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 litres Comp. A (base) in a 10 litre container and 28.5 kg Comp. B (zinc powder) in a 20 litre container. (Together 14.5 litres 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.

Footer - English

Head Office & Nordic	Europe	Middle East	South East Asia
Jotun A/S	Jotun Paints (Europe) Ltd.	Jotun U.A.E Ltd. LLC.	Jotun (Singapore) Pte. Ltd.
P.O. Box 2021	Stather Road, Flixborough		No 11-15, Sixth Lok Yang
N-3248 Sandefjord	North Lincolnshire DN15	Al Quoz Industrial Area	Road
Norway	8RR	P.O Box 3671	Jurong
Phone +47 33 45 70 00	United Kingdom	Dubai U.A.E	Singapore 628 111
Fax +47 33 46 46 13	Phone +44 172 44 00 000	Phone +971 4 3 39 50 00	Phone +65 6265 4711
	Fax +44 172 44 00 100	Fax +971 4 3 38 06 66	Fax +65 6265 7484

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