

# Technical Data Sheet



## Tankguard Zinc

### Product description

This is a two component moisture curing inorganic zinc ethyl silicate coating. It is a specially designed tank coating and lining with excellent cargo resistance. To be used as single coat system only, in atmospheric and immersed environments. Suitable for properly prepared carbon steel substrates. It can be applied down to +5 °C surface temperature. This product complies with ASTM D520 type II zinc dust.

### Typical use

Specially designed as a one coat tank coating system. Particularly suitable for potable water and methanol tanks. Refer to Marine Product Resistance List on [www.jotunprl.com](http://www.jotunprl.com). and Protective Product Resistance List.

### Approvals and certificates

Approved by the Norwegian Institute of Public Health for use in contact with potable water.

Additional certificates and approvals may be available on request.

### Colours

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	16 °C
Density	calculated	2.6 kg/l
VOC-US/Hong Kong	US EPA method 24 (tested) (CARB(SCM)2007, SCAQMD rule 1113, Hong Kong)	500 g/l
VOC-EU	IED (2010/75/EU) (theoretical)	538 g/l
VOC-China	GB/T 23985-2009 (tested)	459 g/l
VOC-Korea	Korea Clean Air Conservation Act (tested) (Max. thinning ratio included)	525 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.

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## Film thickness per coat

### Typical recommended specification range

Dry film thickness	75 - 170	µm
Wet film thickness	110 - 250	µm
Theoretical spreading rate	8.9 - 3.9	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.
Roller:	Roller application only to be used for scallops, ratholes, small pipes etc.

### Product mixing ratio (by volume)

Tankguard Zinc Comp A	3 part(s)
Jotun Zinc 100 Comp B	1 part(s)

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### Thinner/Cleaning solvent

Thinner: Jotun Thinner No. 25

### Guiding data for airless spray

Nozzle tip (inch/1000): 17-23  
 Pressure at nozzle (minimum): 100 bar/1400 psi

## Drying and Curing time

Substrate temperature	5 °C	10 °C	15 °C	23 °C	30 °C	40 °C
Surface (touch) dry	1 h	45 min	45 min	30 min	27 min	20 min
Walk-on-dry	1.5 h	1 h	1 h	45 min	35 min	30 min
Dried/cured for immersion	5 d	3 d	60 h	36 h	27 h	16 h
Dried/cured for service	8 d	6 d	96 h	48 h	34 h	18 h

For maximum overcoating intervals, refer to the Application Guide (AG) for this product.

The given drying and curing times are measured at relative humidity (RH) 80 % during curing. Higher RH will increase, and lower RH will reduce the curing speed.

Close control of the tank atmosphere temperature and relative humidity shall be exercised during the whole application, drying and curing period. It is important the relative humidity is maintained during application and for a time until inspection is carried out and DFT is approved. When the coating film is approved, the humidity shall be increased and depending on the surface temperature be maintained for a period of time as mentioned above. It may also be done when the coating is fully cured, however if zinc salts have formed on the surface they must be carefully removed first. For touch up on a cured coating, 15 % Jotun Thinner No. 25 should be added.

Ventilation (circulation of humid air) shall be provided to ensure that all surfaces are properly exposed to high humidity.

The relative humidity (RH) shall be minimum 60 % at 23 °C during curing in order to secure a proper cure. At lower temperatures relative humidity must be increased to ensure complete curing. Ventilation shall be provided to ensure that all surfaces are properly exposed to the high humidity air.

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.

Dried/cured for immersion: Minimum time before the coating can be permanently immersed in sea water.

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

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## Induction time and Pot life

Paint temperature	10 °C	15 °C	23 °C	30 °C	40 °C
Pot life	12 h	8 h	8 h	6 h	3 h

## Heat resistance

	Temperature	
	Continuous	Peak
Dry, atmospheric	400 °C	540 °C
Immersed, sea water	60 °C	70 °C
Immersed, crude oil	70 °C	70 °C

Further resistance information can be found in Marine Product Resistance List and/or in Protective Product Resistance List available on Jotun's website, or contact your local Jotun office.

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.

## Additional information

To safeguard cargo resistance and durability the following procedure can be used after the coating is cured for service:

- Spray seawater (not fresh water) on the coating and leave the tank closed. Repeat the water spraying 3-4 times during a 48 hours period.
- Remove water and let the tank dry.
- After the tank is completely dry, wash with fresh water if required.
- When the procedure has been completed the presence of any white zinc salts will not adversely affect the coating performance.

## Packaging (typical)

	Volume (litres)	Size of containers (litres)
Tankguard Zinc Comp A	7.8	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

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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

Tankguard Zinc 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.

## 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.

## 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.

## Colour variation

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

Colour and gloss retention on topcoats/finish coats may vary depending on type of colour, exposure environment such as temperature, UV intensity etc., application quality and generic type of paint. Contact your local Jotun office for further information.

## 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.