

# Technical Data Sheet



Jotun Protects Property

## Muki Z 2001

### Product description

This is a two component inorganic low zinc moisture curing zinc ethyl silicate coating. It is a shop primer designed for very high welding and cutting speed, giving reduced weld porosity and back burning. It is fast drying and has good abrasion resistance making it suitable for stacking shortly after application. Can be used as temporary primer in a new construction phase or as primer in a complete coating system in atmospheric and immersed environments. Suitable for properly prepared carbon steel substrates and recommended to be applied in an automated shop priming line. Compatible with advanced welding technologies including MIG, MAG and G-FCAW.

### Typical use

Marine:  
Suitable as shop primer for entire vessels.

Protective:  
Suitable for structural steel and piping to be exposed to corrosive environments up to very high and immersed. Recommended for offshore environments, refineries, power plants, bridges, buildings, mining equipment and general structural steel.

### Approvals and certificates

Approved for PSPC for Water Ballast Tanks according to IMO Res. MSC 215(82)  
Type approved shop primer according to PSPC IMO Res. MSC 82/W  
Type approved shop primer by DNV GL  
Type approved shop primer by RMSR  
Type approved shop primer by Lloyd's Register.  
Welding approved shop primer according to ISO 17652-2

Additional certificates and approvals may be available on request.

### Colours

green, grey, red

### Product data

Property	Test/Standard	Description
Solids by volume	OCCA Monograph No. 4	28 ± 2 %
Gloss level (GU 60 °)	ISO 2813	matt (0-35)
Flash point	ISO 3679 Method 1	14 °C
Density	calculated	1.4 kg/l

Region	Regulation	Test Standard	VOC Value
US	CARB(SCM)2020 / SCAQMD rule 1113	US EPA Method 24	620 g/l
Hong Kong	Air Pollution Control (VOC) Regulation	US EPA Method 24	620 g/l
EU	European Paint Directive 2004/42/CE	Calculated	628 g/l
EU IED	Industrial Emission Directive 2010/75/EU	Calculated	628 g/l

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Korea Korea Clean Air Conservation Act KS M ISO 11890-1 627 g/l

The provided data is typical for factory produced products, subject to slight variation depending on colour.  
Gloss description: According to Jotun Performance Coatings' definition.

## Film thickness per coat

### Typical recommended specification range

Dry film thickness	15 - 20	µm
Wet film thickness	55 - 70	µm
Theoretical spreading rate	18.7 - 14	m <sup>2</sup> /l

## Surface preparation

### Surface preparation summary table

Substrate	Surface preparation	
	Minimum	Recommended
Carbon steel	Sa 2½ (ISO 8501-1)	Sa 2½ (ISO 8501-1)

## Application

### Application methods

The product can be applied by

Spray:	Use air spray or airless spray.
Brush:	Recommended for touch-up purposes.

### Product mixing ratio (by volume)

Muki Z 2001 Comp A	10 part(s)
Muki Z 2001 Comp B	6.75 part(s)

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### Thinner/Cleaning solvent

Thinner: Jotun Thinner No. 4 / Jotun Thinner No. 25

Jotun Thinner No. 4: for fast evaporation

Jotun Thinner No. 25: for slow evaporation

Jotun Thinner No. 28 can be used as alternative to Jotun Thinner No. 4 for fast evaporation.

Jotun Thinner No. 17 can be used as alternative cleaning solvent.

### Guiding data for airless spray

Nozzle tip (inch/1000): 15-23

Pressure at nozzle (minimum): 50 bar/700 psi

## Drying and Curing time

### Substrate temperature

**23 °C 40 °C**

Surface (touch) dry	1 min	20 sec
Walk-on-dry	3 min	1 min
Dry to over coat, minimum	1 d	1 d
Dried/cured for immersion	1 d	1 d
Dried/cured for service	1 d	1 d

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

Drying and curing times are determined under controlled temperatures and relative humidity below 85 %, and at average of the DFT range for the product.

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.

Dry to over coat, minimum: The recommended shortest time before the next coat can be applied.

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.

## Induction time and Pot life

### Paint temperature

**23 °C**

Pot life	24 h
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## Heat resistance

	Temperature	
	Continuous	Peak
Dry, atmospheric	400 °C	400 °C
Immersed, sea water	50 °C	50 °C

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.

## Product compatibility

Depending on the actual exposure of the coating system, various primers and topcoats can be used in combination with this product. Some examples are shown below. Contact Jotun for specific system recommendation.

Subsequent coat: epoxy, epoxy mastic, acrylic, zinc epoxy

## Packaging (typical)

	Volume (litres)	Size of containers (litres)
Muki Z 2001 Comp A	10	10
Muki Z 2001 Comp B	6.75	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

The product must be stored in accordance with national regulations. Keep the containers in a dry, shaded, 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

Muki Z 2001 Comp A	6 month(s)
Muki Z 2001 Comp B	24 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.

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## 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.