

Jotaguard 100

Product description

This is a two component solvent free polyamine cured epoxy coating. It is a surface tolerant product that can be applied without dew point restrictions, and on damp and wet surfaces. It has good chemical, abrasion and impact resistance. Can be used as primer, mid coat, finish coat or as single coat system in atmospheric and immersed environments. Suitable for properly prepared carbon steel, galvanised steel, stainless steel, aluminium and a range of aged coating surfaces.

Typical use

Recommended for offshore environments, including splash zones, refineries, power plants, bridges, buildings, mining equipment and general structural steel. Only aluminium containing versions to be used as first coat in immersed environments.

Approvals and certificates

Petrobras N-2680 norm for Surface Tolerant solvent Free Epoxy for Wet Surfaces

Certified by NSF International Laboratories to meet the drinking water criteria of ANSI/NSF 61. Note: Approved only to Jotaguard 100 MUN N9,5 (White)

Certified in accordance with IMO Res.215(82) – PSC Water Ballast Tanks

Certified in accordance with IMO Res.288(87) – PSC Crude Oil Tanks **(Valid for Standard Grade only)**

Additional certificates and approvals may be available on request.

Colours

selected range of colours and colours defined in Petrobras' Norm N-1219

Product data

Property	Test/Standard	Description
STANDARD GRADE		
Solids by volume	calculated	98 ± 2 %
Gloss level (GU 60 °)	ISO 2813	gloss (70-85)
Flash point	ISO 3679 Method 1	76 °C
Density	calculated	1.3 kg/l

Region	Regulation	Test Standard	VOC Value
US	CARB(SCM)2020 / SCAQMD rule 1113	Calculated	91 g/l
Hong Kong	Air Pollution Control (VOC) Regulation	Calculated	91 g/l
Korea	Korea Clean Air Conservation Act	Calculated	91 g/l

WINTER GRADE

Solids by volume	calculated	98 ± 2 %
Flash point	ISO 3679 Method 1	76 °C
Density	calculated	1.3 kg/l

Region	Regulation	Test Standard	VOC Value
US	CARB(SCM)2020 / SCAQMD rule 1113	Calculated	93 g/l
Hong Kong	Air Pollution Control (VOC) Regulation	Calculated	93 g/l
Korea	Korea Clean Air Conservation Act	Calculated	93 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.

VOC (theoretically calculated): 84 g/l

Because of the high temperatures used in USA-EPA Method 24 the value might be higher when testing according to this method due to low molecular chemicals in the formulation.

Film thickness per coat

Typical recommended specification range

STANDARD GRADE

Dry film thickness	120 - 250 µm
Wet film thickness	125 - 255 µm
Theoretical spreading rate	8 - 4 m ² /l

WINTER GRADE

Dry film thickness	120 - 250 µm
Wet film thickness	125 - 255 µm
Theoretical spreading rate	8 - 4 m ² /l

The theoretical volume solids of 98% ± 2 for Jotaguard 100 is informed as required in Petrobras Standard N-2680 – Surface Tolerant Solvent Free Epoxy Paint for Wet Surfaces. The purposes for calculation of theoretical spreading rate and wet film thickness to be applied, a practical value of 90% ± 2 (according to ISO 3233) shall be considered.

The resin system is subject to some shrinkage during the curing process. This results in lower dry film thickness and practical spreading rate lower than the theoretically calculated.

Surface preparation

Optimum performance, including adhesion, corrosion protection, heat resistance and chemical resistance is achieved with recommended surface preparation.

Surface preparation summary table

Substrate	Surface preparation	
	Minimum	Recommended
Carbon steel	St 2 (ISO 8501-1)	Sa 2½ (ISO 8501-1)
Stainless steel	The surface shall be hand or machine abraded with non-metallic abrasives or bonded fibre machine or hand abrasive pads to impart a scratch pattern to the surface.	Abrasive blast cleaning to achieve a surface profile using non-metallic abrasive media which is suitable to achieve a sharp and angular surface profile.
Aluminium	The surface shall be hand or machine abraded with non-metallic abrasives or bonded fibre machine or hand abrasive pads to impart a scratch pattern to the surface.	Cleanliness corresponding to description of Sa 1 (ISO 8501-1)
Galvanised steel	The surface shall be clean, dry and appear with a rough and dull profile.	Sweep blast-cleaning using non-metallic abrasive leaving a clean, rough and even pattern.
Shop primed steel	Clean, dry and undamaged approved shop primer (ISO 12944-4 5.4)	NACE No.5 /SSPC SP 12: WJ-1, WJ-2, WJ-3 & WJ-4 as specified
Coated surfaces	Clean, dry and undamaged compatible coating	Clean, dry and undamaged compatible coating

Application

Application methods

The product can be applied by

- Spray:** Use airless spray with high pressure ratio (min. 60:1).
- Brush:** Recommended for stripe coating and small areas. Care must be taken to achieve the specified dry film thickness.
- Roller:** May be used for small areas. Not recommended for first primer coat. Care must be taken to achieve the specified dry film thickness.

Product mixing ratio (by volume)

STANDARD GRADE

Jotaguard 100 Comp A	3 part(s)
Jotaguard 100 Comp B	1 part(s)

WINTER GRADE

Jotaguard 100 Comp A	3 part(s)
Jotaguard 100 Wintergrade Comp B	1 part(s)

Thinner/Cleaning solvent

Cleaning solvent: Jotun Thinner No. 17

When thinners are used as a cleaning solvent, the use must be in accordance with prevailing local regulations.

Guiding data for airless spray

Nozzle tip (inch/1000): 19-25
Pressure at nozzle (minimum): 200 bar/2900 psi

Drying and Curing time

Substrate temperature	5 °C	10 °C	15 °C	23 °C	40 °C
STANDARD GRADE					
Surface (touch) dry			12 h	6 h	2 h
Walk-on-dry			15 h	9 h	3 h
Dry to over coat, minimum			15 h	9 h	3 h
Dried/cured for service			10 d	7 d	5 d
WINTER GRADE					
Surface (touch) dry	18 h	11 h	9 h	4 h	
Walk-on-dry	22 h	17 h	11 h	6 h	
Dry to over coat, minimum	22 h	17 h	11 h	6 h	
Dried/cured for service	18 d	14 d	10 d	7 d	

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

Measured according to ASTM D 1640 at 120 µm, 25 °C and 60 % RH.

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

Induction time and Pot life

Paint temperature **23 °C**

STANDARD GRADE

Pot life 3 h

WINTER GRADE

Pot life 1.5 h

Petrobras test method: ABNT NBR 15742 Rev. 0

Viscosity will increase after 1 hour. Refer to the Application Guide (AG) for additional information.

Heat resistance

	Temperature	
	Continuous	Peak
Dry, atmospheric	120 °C	140 °C
Immersed, sea water	60 °C	70 °C
Immersed, crude oil	60 °C	70 °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.

Previous coat: epoxy shop primer, inorganic zinc silicate shop primer, zinc epoxy, epoxy, inorganic zinc silicate

Subsequent coat: polyurethane, epoxy, acrylic

Packaging (typical)

	Volume (litres)	Size of containers (litres)
Jotaguard 100 Comp A	15	20
Jotaguard 100 Comp B	5	5
Jotaguard 100 Wintergrade Comp B	5	5

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

Jotaguard 100 Comp A	18 month(s)
Jotaguard 100 Comp B	12 month(s)
Jotaguard 100 Wintergrade 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.

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.