

## Jotacote Universal

### Product description

This is a two component amine cured pure epoxy coating. It is a fast drying, abrasion resistant, high solids, high build product. Designed as an universal, all round, all year, new building coating where fast dry to handle is required. 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, shop primed steel, stainless steel, aluminium and concrete substrates. It can be applied at sub zero surface temperatures.

### Typical use

Marine:

Exterior and interior areas, including outside hulls, superstructures, decks, cargo holds and water ballast tanks.

Protective:

Recommended for offshore environments, including splash zones, 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)

Additional certificates and approvals may be available on request.

### Colours

aluminium, aluminium red toned, aluminium lumi, buff, red, grey

### Product data

Property	Test/Standard	Description
Solids by volume	ISO 3233	72 ± 2 %
Gloss level (60 °)	ISO 2813	semi gloss (35-70)
Flash point	ISO 3679 Method 1	35 °C
Specific gravity	calculated	1,33 kg/l
VOC-USA / VOC Hong Kong	EPA Method 24	260 g/l
VOC-Solvent Emission Directive	SED (1999/13/EC)	193 g/kg

The provided data is typical for factory produced products, subject to slight variation depending on colour.

All data is valid for mixed paint.

Gloss level: According to Jotun Performance Coatings' definition.

### Recommended film thickness per coat

Film thickness and spreading rate	Dry film thickness	Wet film thickness	Theoretical spreading rate (m <sup>2</sup> /l)
	(µm)	(µm)	
Minimum	75	105	9,6
Maximum	300	415	2,4

Typical

160

220

4,5

For DFT below 150 µm thinner should be added.

## 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	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 and to remove all polish from the surface.	Abrasive blast cleaning to achieve a surface profile using approved 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 and to remove all polish from the surface.	Abrasive blast cleaning to achieve a surface profile using approved non-metallic abrasive media which is suitable to achieve a sharp and angular surface profile.
Galvanised steel	The surface shall be clean, dry and appear with a rough and dull profile.	Light brush blasting using non-metallic abrasive leaving a clean, rough and even pattern.
Shop primed steel	Dry, clean and intact shop primer.	Abrasive swept or alternatively blasted to Sa 2 (ISO 8501-1) of at least 70 % of the surface.
Coated surfaces	Clean, dry and undamaged compatible coating (ISO 12944-4 6.1)	Sa 2½ (ISO 8501-1)
Concrete	Low pressure water washing to a rough, clean, dry and laitance free surface.	Minimum 4 weeks curing. Moisture content maximum 5 %. Prepare the surface by means of enclosed blast shot or diamond grinding and other appropriate means to abrade the surrounding concrete and to remove laitance.

## Application

### Application methods

The product can be applied by

Spray: Use airless spray.

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)

Jotacote Universal Comp A	3	part(s)
Jotacote Universal Comp B	1	part(s)

### Thinner/Cleaning solvent

Thinner: Jotun Thinner No. 17

### Guiding data for airless spray

Nozzle tip (inch/1000):	17-23
Pressure at nozzle (minimum):	150 bar/2100 psi

## Drying and Curing time

Substrate temperature	-10 °C	-5 °C	0 °C	5 °C	10 °C	23 °C	40 °C
Surface (touch) dry	36 h	20 h	14 h	8 h	5 h	2.5 h	1 h
Walk-on-dry	4 d	48 h	30 h	16 h	10 h	5 h	2 h
Dried to over coat, minimum	42 h	24 h	18 h	10 h	7 h	4 h	2 h
Dried/cured for service			21 d	14 d	10 d	7 d	3 d
Dried/cured for immersion	10 d	7 d	4 d	3 d	2 d	1 d	12 h

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

Surface (touch) dry: The state of drying when slight pressure with a finger does not leave an imprint or reveal tackiness. Dry sand sprinkled on the surface can be brushed off without sticking to or causing damage to the surface.

Walk-on-dry: Minimum time before the coating can tolerate normal foot traffic without permanent marks, imprints or other physical damage.

Dried to over coat, minimum: The shortest time allowed 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.

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

## Induction time and Pot life

Paint temperature	23 °C
Induction time	10 min
Pot life	1.5 h

## Heat resistance

	Temperature	
	Continuous	Peak
Dry, atmospheric	120 °C	140 °C
Immersed, sea water	50 °C	60 °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: inorganic zinc silicate shop primer, epoxy, epoxy mastic, zinc epoxy, zinc silicate

Subsequent coat: acrylic, alkyd, epoxy, polyurethane, polysiloxane, vinyl epoxy, epoxy mastic, vinyl epoxy

## Packaging (typical)

	Volume (litres)	Size of containers (litres)
Jotacote Universal Comp A	15	20
Jotacote Universal 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, 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

Jotacote Universal Comp A	48 month(s)
Jotacote Universal 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.

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## 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.

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## Colour variation

Products primarily meant for use as primers and antifoulings may have slight color variations from batch to batch. Such products may fade and chalk when exposed to sunlight and weathering.

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## 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.

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