Technical Data Sheet

Jotun Protects Property

Jotacote Universal N10

Product description

This is a two component polyamine cured pure epoxy coating. It is a high solids, high build, abrasion resistant product. Available with curing agents for standard, and for quick drying (QD) properties. Specially designed as a 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 aluminium, carbon steel, galvanised steel, shop primed steel and stainless steel substrate. 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. This product has very high flexibility making it specially suitable for the temperature variation experienced in crude oil, chemical and shuttle tankers. Approved for PSPC cross over testing with a wide range of shop primers.

Approvals and certificates

Certified in accordance with IMO Res.215(82) – PSPC Water Ballast Tanks
Certified in accordance with IMO Res.288(87) – PSPC Crude Oil Tanks

When used as part of an approved scheme, this material has the following certification:
- Low Flame Spread in accordance with EU Directive for Marine Equipment. Approved in accordance with parts 5 and 2 of Annex 1 of IMO 2010 FTP Code, or Parts 5 and 2 of Annex 1 of IMO FTPC when in compliance with IMO 2010 FTP Code Ch. 8

Consult your Jotun representative for details.

Additional certificates and approvals may be available on request.

Colours

aluminium, aluminium red toned, black, buff, grey, red, bronze

Product data

Property	Test/Standard	Description
Standard grade		
Solids by volume	ISO 3233	72 ± 2 %
Gloss level (GU 60 °)	ISO 2813	matt (0-35)
Flash point	ISO 3679 Method 1	30 °C
Density	calculated	1.4 kg/l

Region	Regulation	Test Standard	VOC Value
US	CARB(SCM)2020 / SCAQMD rule 1113	Calculated	247 g/l
Hong Kong	Air Pollution Control (VOC) Regulation	Calculated	247 g/l
EU	European Paint Directive 2004/42/CE	Calculated	261 g/l
EU IED	Industrial Emission Directive 2010/75/EU	Calculated	261 g/l

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Korea	Korea Clean Air Conservation Act	KS M ISO 11890-1	272 g/l
China	GB 30981-2020 Limit of harmful substances of industrial protective coatings	GB/T 23985-2009 8.3	239 g/l

QD grade

Solids by volume	ISO 3233	72 ± 2 %
Flash point	ISO 3679 Method 1	31 °C
Density	calculated	1.4 kg/l

Region	Regulation	Test Standard	VOC Value
US	CARB(SCM)2020 / SCAQMD rule 1113	US EPA Method 24	262 g/l
Hong Kong	Air Pollution Control (VOC) Regulation	US EPA Method 24	262 g/l
EU	European Paint Directive 2004/42/CE	ISO 11890	263 g/l
Korea	Korea Clean Air Conservation Act	KS M ISO 11890-1	235 g/l
China	GB 30981-2020 Limit of harmful substances of industrial protective coatings	GB/T 23985-2009 8.3	210 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

Standard grade

Dry film thickness	75	-	300	µm
Wet film thickness	105	-	415	µm
Theoretical spreading rate	9.6	-	2.4	m²/l

QD grade

Dry film thickness	75	-	300	µm
Wet film thickness	105	-	415	µm
Theoretical spreading rate	9.6	-	2.4	m²/l

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.	Abrasive blast cleaning to achieve a surface profile using 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.	Sweep blast-cleaning using non-metallic abrasive leaving a clean, rough and even pattern.
Shop primed steel	Dry, clean and intact shop primer.	Sweep blasted or alternatively blasted to Sa 2 (ISO 8501-1) of at least 70 % of the surface.
Coated surfaces	Clean, dry and undamaged compatible coating	Sa 2½ (ISO 8501-1)

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

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. For QD version, brush is not recommended for temperatures above 15 °C.
Roller:	May be used for small areas. Not recommended for first primer coat. Care must be taken to achieve the specified dry film thickness. For QD version, roller is not recommended for temperatures above 15 °C.

Product mixing ratio (by volume)

Jotacote Universal N10 Comp A	3 part(s)
Jotacote Universal N10 Comp B	1 part(s)
Jotacote Universal N10 Comp A	3 part(s)
Jotacote Universal N10 QD Comp B	1 part(s)

Thinner/Cleaning solvent

Thinner: Jotun Thinner No. 17

Guiding data for airless spray

Nozzle tip (inch/1000): 17-27

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
Standard grade							
Surface (touch) dry	26 h	14 h	10 h	6 h	5 h	2 h	1 h
Walk-on-dry	72 h	34 h	24 h	14 h	10 h	5 h	2 h
Dry to over coat, minimum	36 h	22 h	15 h	9 h	7 h	4 h	2 h
Dried/cured for immersion	14 d	7 d	4 d	3 d	2 d	1 d	12 h
Dried/cured for service			21 d	14 d	10 d	7 d	3 d
QD grade							
Surface (touch) dry	17 h	10 h	7 h	4 h	3 h	1 h	
Walk-on-dry	40 h	25 h	20 h	10 h	7.5 h	3 h	
Dry to over coat, minimum	26 h	17 h	10 h	7 h	5 h	2 h	
Dried/cured for immersion	12 d	6 d	4 d	3 d	2 d	1 d	
Dried/cured for service			21 d	14 d	10 d	7 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
Standard grade	
Induction time	10 min
Pot life	1.5 h
QD grade	
Induction time	10 min
Pot life	1 h

Heat resistance

	Temperature	
	Continuous	Peak
Dry, atmospheric	120 °C	140 °C
Immersed, sea water	60 °C	70 °C
Immersed, crude oil	80 °C	90 °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, 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 N10 Comp A	15	20
Jotacote Universal N10 Comp B	5	5
Jotacote Universal N10 QD 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

Jotacote Universal N10 Comp A	48 month(s)
Jotacote Universal N10 Comp B	48 month(s)
Jotacote Universal N10 QD 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.

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