Technical Data Sheet

Tankguard Special Ultra

Product description

This is a two component polyamine cured novolac epoxy coating. Specially designed tank coating with excellent chemical resistance and a turn-around time of 5 days after carriage of methanol. Developed as a 3-coat system for optimum chemical resistance in atmospheric and immersed environments. Suitable for properly prepared carbon steel, galvanised steel and stainless steel substrates. It can be applied down to +5 °C surface temperature.

Typical use

Marine:
Specially designed as an internal tank coating for chemical tanks. This coating has excellent resistance to a wide range of products with very little chemical absorption making it highly suitable for frequent changes of cargo. Refer to Marine Product Resistance List on www.jotunprl.com.

Approvals and certificates

Approved to UK Defence Standard 80-97 issue 5, annex G for resistance to Avtur F-34 FSII aviation fuel
In compliance with Federal Drug Authority, USA, FDA Title 21, Part 175.300, approved for exposure to liquid foods.
Certified in accordance with IMO Res.288(87) – PSPC Crude Oil Tanks

Additional certificates and approvals may be available on request.

Colours

light red, yellow, light grey

Product data

Property	Test/Standard	Description
Solids by volume	ISO 3233	70 ± 2 %
Gloss level (GU 60 °)	ISO 2813	semi gloss (35-70)
Flash point	ISO 3679 Method 1	28 °C
Density	calculated	1.6 kg/l

Region	Regulation	Test Standard	VOC Value
US	CARB(SCM)2020 / SCAQMD rule 1113	US EPA Method 24	298 g/l
Hong Kong	Air Pollution Control (VOC) Regulation	US EPA Method 24	298 g/l
EU	European Paint Directive 2004/42/CE	Calculated	342 g/l
EU IED	Industrial Emission Directive 2010/75/EU	Calculated	342 g/l
Korea	Korea Clean Air Conservation Act	KS M ISO 11890-1	267 g/l
China	GB 30981-2020 Limit of harmful substances of industrial protective coatings	GB/T 23985-2009 8.3	298 g/l

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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	80	-	150	µm
Wet film thickness	115	-	215	µm
Theoretical spreading rate	8.8	-	4.7	m²/l

Maximum recommended film thickness is often exceeded in overlap zones and in difficult-to-spray areas. This product can be applied up to 50% higher than film thickness stated in the official specification provided by Jotun for respective project without loss of technical properties.

Surface preparation

Surface preparation summary table

Substrate	Surface preparation	
	Minimum	Recommended
Carbon steel	Sa 2½ (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.
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.

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.

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Roller: Roller application only to be used for scallops, ratholes, small pipes etc.

Product mixing ratio (by volume)

Tankguard Special Ultra Comp A	4 part(s)
Tankguard Special Ultra Comp B	1 part(s)

Thinner/Cleaning solvent

Thinner: Jotun Thinner No. 17 / Jotun Thinner No. 24

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	5 °C	10 °C	15 °C	23 °C	30 °C	40 °C
Surface (touch) dry	24 h	16 h	6 h	4 h	3 h	2 h
Walk-on-dry	36 h	24 h	10 h	7 h	4 h	3 h
Dry to over coat, minimum	36 h	24 h	20 h	16 h	14 h	10 h
Dried/cured for immersion	15 d	7 d	5 d	4 d	3 d	2 d
Dried/cured for service	30 d	14 d	10 d	7 d	4 d	3 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.

Preconditioning (minimum three-month period after the carriage of first cargo) or hot cure is required to carry certain aggressive cargoes. For further information, please see Jotun Marine Tank Coating Notes (General Note III) and Specific Notes for cargoes on www.jotunprl.com

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.

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Induction time and Pot life

Paint temperature	5 °C	10 °C	15 °C	23 °C	30 °C	40 °C
Induction time	30 min	25 min	20 min	15 min	10 min	5 min
Pot life	4 h	3 h	3 h	2 h	1.5 h	1 h

Heat resistance

	Temperature	
	Continuous	Peak
Dry, atmospheric	140 °C	150 °C
Immersed, sea water	80 °C	90 °C
Immersed, crude oil	120 °C	130 °C

Further resistance information can be found in Marine 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.

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: itself only

Subsequent coat: itself only

Packaging (typical)

	Volume (litres)	Size of containers (litres)
Tankguard Special Ultra Comp A	16	20
Tankguard Special Ultra Comp B	4	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.

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Shelf life at 23 °C

Tankguard Special Ultra Comp A	24 month(s)
Tankguard Special Ultra 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 applicator and operator 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 should 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 in 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 sought medical attention 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 data given 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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