Jotatemp 1000

Product description

This is a three component titanium catalyzed inorganic ceramic copolymer based coating, which cures in ambient conditions. It complies to the generic type inert multipolymeric matrix coating. Designed as a heat resistant coating, and it is resistant to low temperatures down to -196 °C and high temperatures up to 1000 °C continuously, where substrates allow. Can be used as primer or finish coat in atmospheric environments. Suitable for properly prepared carbon steel and ceramic substrates. It can be applied on hot substrates up to 250 °C. Please refer to the application guide for more detailed information. It will offer proper corrosion protection at ambient conditions during construction and shut-down periods. The product passes the standard tests used for qualifying coatings preventing corrosion under insulation (CUI).

Typical use

Protective:
Suitable for insulated and non-insulated surfaces of carbon steel and ceramic substrates. For other substrates and temperatures, please contact your local Jotun office. Specially designed for preventing corrosion under insulation (CUI) above 250°C. Can be used in combination with Jotatemp 540 Zinc as primer, providing heat resistance up to 540 °C and lasting corrosion protection. For optimized performance on stainless steel and alloyed steel (P91), we recommend Jotatemp 1000 HT.

Approvals and certificates

Tested in accordance with ISO 12944-6, high expected durability in corrosivity category C5
Passing vertical pipe test for CUI performance as described in ISO 19277-2018.
Passing 1000 hours dry heat test at 540°C on carbon steel.
Passing 1000 hours dry heat test at 1000°C on ceramic substrates.
Passing ASTM D2485 : 2018 - Standard Test Methods for Evaluating Coatings For High Temperature Service.
Passing ASTM D6944 : 2009 - Resistance of cured coatings to thermal cycling.

Additional certificates and approvals may be available on request.

Other variants available

Jotatemp 1000 HT for stainless steel, alloyed steel (P91) and ceramic substrates.

Refer to separate TDS for each variant.

Colours

dark grey, aluminium, aluminium effect (close to RAL 9006)

Product data

Property	Test/Standard	Description
Solids by volume	ISO 3233	75 ± 2 %
Gloss level (GU 60 °)	ISO 2813	matt (0-35)
Flash point	ISO 3679 Method 1	26 °C
Density	calculated	1.8 kg/l

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Region	Regulation	Test Standard	VOC Value
US	CARB(SCM)2020 / SCAQMD rule 1113	Calculated	300 g/l
EU	European Paint Directive 2004/42/CE	Calculated	300 g/l
EU IED	Industrial Emission Directive 2010/75/EU	Calculated	300 g/l
Korea	Korea Clean Air Conservation Act	KS M ISO 11890-1	363 g/l
China	GB 30981-2020 Limit of harmful substances of industrial protective coatings	GB/T 23985-2009 8.3	330 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	100	-	150	µm
Wet film thickness	130	-	200	µm
Theoretical spreading rate	7.5	-	5	m²/l

In one-coat systems, dry film thickness up to 200 µm can be applied.

Surface preparation

Surface preparation summary table

Substrate	Surface preparation	
	Minimum	Recommended
Carbon steel	St 2 (ISO 8501-1).	Sa 2½ (ISO 8501-1).
Ceramic substrates	The surface shall be clean and dry.	The surface shall be clean and dry.
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.

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Brush:	Recommended for stripe coating and small areas. Care must be taken to achieve the specified dry film thickness.

Product mixing ratio (by volume)

Jotatemp 1000 Comp A	110 part(s)
Jotatemp 1000 Comp B	1 part(s)
Jotatemp 1000 Comp C	2.5 part(s)

Mix component A and component C thoroughly before adding component B.

Thinner/Cleaning solvent

Thinner: Jotun Thinner No. 7 / Jotun Thinner No. 10

To achieve the best spraying properties the product can be thinned 3-5% by volume before application.

Note: Korean VOC regulation "Korea Clean Air Conservation Act" and its corresponding thinning limit will prevail over recommended thinning volumes.

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	15 °C	23 °C	40 °C	100 °C
Surface (touch) dry	5.5 h	3 h	2.5 h	1.5 h	15 min
Walk-on-dry	24 h	18 h	6 h	3.5 h	15 min
Dry to over coat, minimum	24 h	18 h	6 h	3.5 h	0 min
Dried/cured for service	4 d	3 d	24 h	18 h	15 min

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

Due to the fast evaporation above 100°C, instant drying is expected.
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.

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Induction time and Pot life

Paint temperature	10 °C	15 °C	23 °C	40 °C
Pot life	10 h	8 h	6 h	4 h

Heat resistance

Carbon steel:
Continuous: 540°C

Ceramic substrates:
Continuous: 1000°C

The continuous operational temperature limits are based on the substrate's heat resistant properties.

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:	zinc silicate, inert multipolymeric matrix, itself
Subsequent coat:	silicone acrylic

Packaging (typical)

	Volume (litres)	Size of containers (litres)
Jotatemp 1000 Comp A	4.4	5
Jotatemp 1000 Comp B	0.04	0.25
Jotatemp 1000 Comp C	0.1	1

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.

Storage temperature not to exceed 40 °C.

Shelf life at 23 °C

Jotatemp 1000 Comp A	12 month(s)

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Jotatemp 1000 Comp B	24 month(s)
Jotatemp 1000 Comp C	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.

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