

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 482 °F (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 1004 °F (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.

Colors

dark grey, aluminum, aluminum 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	79 °F (26 °C)
Density	calculated	1.8 kg/l
VOC-US/Hong Kong	US EPA method 24 (tested) (CARB(SCM)2007, SCAQMD rule 1113, Hong Kong)	3.02 lbs/gal

The provided data is typical for factory produced products, subject to slight variation depending on color.
All data is valid for mixed paint.
Gloss description: According to Jotun Performance Coatings' definition.

Film thickness per coat

Typical recommended specification range

Dry film thickness	4 mils (100 µm)	- 6 mils (150 µm)
Wet film thickness	5 mils (130 µm)	- 8 mils (200 µm)
Theoretical spreading rate	310 ft ² /gal (7.5 m ² /l)	- 200 ft ² /gal (5 m ² /l)

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

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) or SSPC SP-2.	Sa 2½ (ISO 8501-1) or NACE No. 2 / SSPC SP-10.
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.
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

Temperatures:
-10°C = 14°F / -5°C = 23°F / 0°C = 32°F / 5°C = 41°F / 10°C = 50°F / 15°C = 59°F / 23°C = 73°F / 35°C = 95°F / 40°C = 104°F / 100°C = 212°F

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
Dried 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.

Induction time and Pot life

Temperatures: 15°C = 59°F / 23°C = 73°F

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, itself

Packaging (typical)

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

4.4 l = 1.16 gal
0.04 l = 0.008 gal
0.1 l = 0.026 gal

The volume stated is for factory made colors. 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.

Storage temperature not to exceed 104 °F (40 °C).

Shelf life at 73°F (23 °C)

Jotatemp 1000 Comp A	12 month(s)
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.

Note

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.

Color variation

When applicable, products primarily meant for use as primers or antifoulings may have slight color variations from batch to batch. Such products and epoxy based products used as a finish coat may chalk when exposed to sunlight and weathering.

Color and gloss retention on topcoats/finish coats may vary depending on type of color, 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.