Technical Data Sheet

Jotatemp 540 Zinc

Product description

This is a two component glass flake reinforced inorganic zinc ethyl silicate coating. It conforms to the compositional requirements of SSPC paint 20, level 3. It provides corrosion protection as a single coat and can be used under insulation if overcoated with a high temperature coating designed to offer protection against CUI. It is heat resistant up to 540 °C (1004 °F). Suitable for properly prepared carbon steel substrates only. This product complies with ASTM D520 type II zinc dust.

Typical use

Protective:
Suitable for process and piping equipment that will be exposed to elevated temperatures. Can be used at ambient temperatures, provided it is used as a primer in a suitable coating system. Specially designed as a primer in coating systems where extended durability at high temperature is required.

Colours

bluish grey

Product data

Property	Test/Standard	Description
Solids by volume	OCCA Monograph No. 4	80 ± 2 %
Gloss level (GU 60 °)	ISO 2813	matt (0-35)
Flash point	ISO 3679 Method 1	19 °C
Density	calculated	2 kg/l

Region	Regulation	Test Standard	VOC Value
US	CARB(SCM)2020 / SCAQMD rule 1113	US EPA Method 24	358 g/l
Hong Kong	Air Pollution Control (VOC) Regulation	US EPA Method 24	358 g/l
EU	European Paint Directive 2004/42/CE	Calculated	462 g/l
EU IED	Industrial Emission Directive 2010/75/EU	Calculated	462 g/l
Korea	Korea Clean Air Conservation Act	KS M ISO 11890-1	384 g/l
China	GB 30981-2020 Limit of harmful substances of industrial protective coatings	GB/T 23985-2009 8.3	309 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.

This Technical Data Sheet supersedes those previously issued.
The Technical Data Sheet (TDS) is recommended to be read in conjunction with the Safety Data Sheet (SDS) and the Application Guide (AG) for this product. For your nearest local Jotun office, please visit our website at www.jotun.com

Film thickness per coat

Typical recommended specification range

Dry film thickness	75	-	170	µm
Wet film thickness	95	-	215	µm
Theoretical spreading rate	10.7	-	4.7	m²/l

Surface preparation

Surface preparation summary table

Substrate	Surface preparation	
	Minimum	Recommended
Carbon steel	Sa 2½ (ISO 8501-1) with a surface profile Fine to Medium G (ISO 8503-2)	Sa 2½ (ISO 8501-1) with a surface profile Fine to Medium G (ISO 8503-2)

Application

Application methods

The product can be applied by

Spray:	Use air spray or airless spray.
Brush:	Recommended for stripe coating and small areas. Care must be taken to achieve the specified dry film thickness. In order to avoid settling of heavy zinc, continuous mechanical stirring during application might be necessary.

Product mixing ratio (by volume)

Jotatemp 540 Zinc Comp A	8	part(s)
Jotatemp 540 Zinc Comp B	1.32	part(s)

Component A is a liquid and Component B is dry zinc dust. Component A must be well shaken before use. Pour the zinc dust slowly into the liquid during mechanical mixing. Stir until lump free and pass through a 60 mesh sieve.

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Thinner/Cleaning solvent

Thinner:	Jotun Thinner No. 4 / Jotun Thinner No. 25
Thinning max.:	5 %

Jotun Thinner No. 4: for fast evaporation
Jotun Thinner No. 25: for slow evaporation

Jotun Thinner No. 28 can be used as alternative to Jotun Thinner No. 4 for fast evaporation.
Thinning is not normally required. Consult the local representative for advice during application in extreme conditions. Do not thin more than allowed by local environmental legislation.

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

Jotun Thinner No. 17 can be used as alternative cleaning solvent.

Guiding data for airless spray

Nozzle tip (inch/1000):	21-23
Pressure at nozzle (minimum):	100 bar/1400 psi

Drying and Curing time

Substrate temperature	5 °C	10 °C	23 °C	40 °C
Surface (touch) dry	1 h	30 min	15 min	10 min
Walk-on-dry	1.5 h	45 min	30 min	25 min
Dry to over coat, minimum	15 h	10 h	3 h	1 h
Dried/cured for service	15 h	10 h	3 h	1 h

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

The given drying and curing times, as well as over coating intervals for inorganic zinc ethyl silicates are measured at relative humidity (RH) 80 % during application and curing. An even higher RH will increase the curing speed. The paint requires continuous RH above 50 % to cure.

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	23 °C
Pot life	8 h

Heat resistance

	Temperature	
	Continuous	Peak
Dry, atmospheric	540 °C	600 °C

This product can withstand a peak temperature of 600 °C (1112 °F). A continuous temperature above 540 °C will however affect the corrosion protection of the coating. Note that at higher temperatures a suitable topcoat will extend the life of the coating.

Peak temperature duration max. 1 hour.

The temperatures listed relate to retention of protective properties. Aesthetic properties may suffer at these temperatures.

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.

Subsequent coat: epoxy, silicone acrylic, titanium catalysed inorganic ceramic copolymer

Packaging (typical)

	Volume (litres)	Size of containers (litres)
Jotatemp 540 Zinc Comp A	8	10
Jotatemp 540 Zinc Comp B	1.32	20

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

Jotatemp 540 Zinc Comp A	12 month(s)
Jotatemp 540 Zinc 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.

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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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