Jotamastic 90

Product description

This is a two component polyamine cured epoxy mastic coating. It is a surface tolerant, abrasion resistant, high solids, high build product. This product is tintable in a wide range of colours in Jotun's Multicolor Industry (MCI) system. Specially designed for areas where optimum surface preparation is not possible or required. Provides long lasting protection in environments with high corrosivity. Can be used as primer, mid coat, finish coat or as single coat system in atmospheric and immersed environments. Suitable for properly prepared carbon steel, galvanised steel, stainless steel, aluminium, concrete and a range of aged coating surfaces. It can be applied at sub zero surface temperatures.

Typical use

General:
Primarily designed for maintenance and repair.

Marine:
Outside hulls, exterior and interior areas.

Protective:
Recommended for offshore environments, including splash zones, refineries, power plants, bridges, buildings, mining equipment and general structural steel.

Approvals and certificates

This product contributes to the Green Buildings Standard credits. Please see section Green Building Standards.

Certified in accordance with IMO Res.288(87) – PSPC Crude Oil Tanks **(Valid for Standard Grade only)**
NORSOK System 1, Rev.5
Grain, Newcastle Occupational Health

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.

Other variants available

Jotamastic 90 Aluminium
Jotamastic 90 GF

Refer to separate TDS for each variant.

Colours

black, white and according to Multicolor Industry tinting system (MCI)

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Product data

Property	Test/Standard	Description
STANDARD GRADE		
Solids by volume	ISO 3233	80 ± 2 %
Gloss level (GU 60 °)	ISO 2813	semi gloss (35-70)
Flash point	ISO 3679 Method 1	35 °C
Density	calculated	1.4 kg/l
VOC-US/Hong Kong	US EPA method 24 (tested) (CARB(SCM)2007, SCAQMD rule 1113, Hong Kong)	270 g/l
VOC-EU	IED (2010/75/EU) (theoretical)	234 g/l
VOC-China	GB/T 23985-2009 (tested)	243 g/l
VOC-Korea	Korea Clean Air Conservation Act (tested) (Max. thinning ratio included)	273 g/l
WINTER GRADE		
Solids by volume	ISO 3233	80 ± 2 %
Flash point	ISO 3679 Method 1	36 °C
Density	calculated	1.4 kg/l
VOC-US/Hong Kong	US EPA method 24 (tested) (CARB(SCM)2007, SCAQMD rule 1113, Hong Kong)	220 g/l
VOC-EU	IED (2010/75/EU) (theoretical)	213 g/l
VOC-China	GB/T 23985-2009 (tested)	208 g/l
VOC-Korea	Korea Clean Air Conservation Act (tested)	287 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.

Small colour variations may occur when changing between the two curing agents. If exposed to weathering without topcoat, the Wintergrade (WG) version will yellow at a faster rate than the same colour in Standard grade.

The VOC values refer to grey colour.

Film thickness per coat

Typical recommended specification range

STANDARD GRADE

Dry film thickness	100	-	300	µm
Wet film thickness	125	-	375	µm
Theoretical spreading rate	8	-	2.7	m²/l

WINTER GRADE

Dry film thickness	100	-	300	µm
Wet film thickness	125	-	375	µm
Theoretical spreading rate	8	-	2.7	m²/l

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Surface preparation

Surface preparation summary table

Substrate	Surface preparation	
	Minimum	Recommended
Carbon steel	St 2 (ISO 8501-1)	Sa 2 (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	Clean, dry and undamaged shop primer (ISO 12944-4 5.4)	Sa 2 (ISO 8501-1)
Coated surfaces	Clean, dry and undamaged compatible coating	Clean, dry and undamaged compatible coating
Concrete	Low pressure water washing to a rough, clean, dry and laitance free surface.	Minimum 4 weeks curing. Moisture content maximum 5 %. Prepare the surface by means of enclosed blast shot or diamond grinding and other appropriate means to abrade the surrounding concrete and to remove laitance.

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.
Roller:	May be used for small areas. Not recommended for first primer coat. Care must be taken to achieve the specified dry film thickness.

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Product mixing ratio (by volume)

STANDARD GRADE

Jotamastic 90 Comp A	3.5 part(s)
Jotamastic 90 Standard Comp B	1 part(s)

WINTER GRADE

Jotamastic 90 Comp A	3.5 part(s)
Jotamastic 90 Wintergrade Comp B	1 part(s)

Independent on substrate temperature the minimum temperature of the mixed base and curing agent is 10 °C. Lower temperature may require additional thinner to reach correct application viscosity. Additional thinner gives lower sag resistance and slower curing. If addition of thinner is required, this shall be done after mixing of the two components.

Thinner/Cleaning solvent

Thinner: Jotun Thinner No. 17

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.

Guiding data for airless spray

Nozzle tip (inch/1000):	19-25
Pressure at nozzle (minimum):	150 bar/2100 psi

Drying and Curing time

Substrate temperature	-5 °C	0 °C	5 °C	10 °C	23 °C	40 °C
STANDARD GRADE						
Surface (touch) dry			20 h	12 h	4 h	1.5 h
Walk-on-dry			40 h	20 h	6 h	3 h
Dry to over coat, minimum			30 h	10 h	3 h	1.5 h
Dried/cured for service			28 d	14 d	7 d	2 d
WINTER GRADE						
Surface (touch) dry	24 h	18 h	12 h	8 h	3.5 h	
Walk-on-dry	72 h	30 h	20 h	12 h	4 h	
Dry to over coat, minimum	54 h	20 h	10 h	6 h	2 h	
Dried/cured for service	21 d	14 d	10 d	5 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.

Surface (touch) dry: The state of drying when slight pressure with a finger does not leave an imprint or reveal tackiness.

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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

Paint temperature	23 °C
STANDARD GRADE	
Pot life	2 h
WINTER GRADE	
Pot life	45 min

Heat resistance

	Temperature	
	Continuous	**Peak**
Dry, atmospheric	90 °C	-
Immersed, sea water	50 °C	60 °C
Immersed, crude oil	80 °C	90 °C

WINTER GRADE
Dry, atmospheric, continuous: 120 °C
Dry, atmospheric, Peak: -

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:	epoxy shop primer, inorganic zinc silicate shop primer, zinc epoxy, epoxy, epoxy mastic, inorganic zinc silicate
Subsequent coat:	polyurethane, polysiloxane, epoxy, acrylic, vinyl epoxy

Packaging (typical)

	Volume	Size of containers

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	(litres)	(litres)
Jotamastic 90 Comp A	3.55/15.6	5/20
Jotamastic 90 Standard Comp B	1/4.4	1/5
Jotamastic 90 Wintergrade Comp B	1/4.4	1/5

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, 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

Jotamastic 90 Comp A	48 month(s)
Jotamastic 90 Standard Comp B	24 month(s)
Jotamastic 90 Wintergrade 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.

Green Building Standards

This product contributes to Green Building Standard credits by meeting the following specific requirements:

LEED®v4 (2013)
EQ credit: Low emitting materials
- Healthcare and schools, Exterior applied products: VOC content for Industrial Maintenance Coatings (250 g/l) (CARB(SCM)2007).
MR credit: Building product disclosure and optimization
- Material Ingredients, Option 2: Material Ingredient Optimization, International Alternative Compliance Path - REACH optimization: Fully inventoried chemical ingredients to 100 ppm and not containing substances on the REACH Authorization list – Annex XIV, the Restriction list – Annex XVII and the SVHC candidate list.
- Environmental Product Declarations. Product-specific Type III EPD (ISO 14025;21930, EN 15804).

BREEAM® International (2016)
- Mat 01: Product-specific Type III EPD (ISO 14025;21930, EN 15804).

BREEAM® International (2013)
- Hea 02: VOC content for Binding Primers SB (750 g/l) (EU Directive 2004/42/CE).

The EPDs are available at www.epd-norge.no

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.

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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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