

## Jotafloor Moisture Guard

### Product description

This is a three-component amine cured solvent free epoxy screed. It is specially designed as a moisture barrier on concrete substrate with moisture content below 6% to prevent osmotic blistering of resin-based coating. It is used as mid coat layered in between approved primers and topcoats.

### Scope

The Application Guide offers product details and recommended practices for the use of the product.

The data and information provided are not definite requirements. They are guidelines to assist with efficient and safe use, and optimum service of the product. Adherence to the guidelines does not relieve the applicator of responsibility for ensuring that the work meets specification requirements. Jotuns liability is in accordance with general product liability rules.

The Application Guide (AG) must be read in conjunction with the relevant specification, Technical Data Sheet (TDS) and Safety Data Sheet (SDS) for all the products used as part of the coating system.

### Referred standards

Reference is generally made to ASTM, ICRI, NACE and SSPC Standards. When using standards from other regions it is recommended to reference only one corresponding standard for the substrate being treated.

## Surface preparation

### Concrete surface preparation for primer

The required quality of surface preparation can vary depending on the area of use, expected durability and if applicable, project specification. Surface profile depends on thickness of Jotafloor system.

Below table is the surface profile reference for floor coating system:

Jotun coating system type/description	ICRI description	Total thickness (microns)	Recommended profile
Clear coating	Sealers	25 - 75	CSP 1 - 2
Thin films	Thin films	100 - 250	CSP 2 - 3
High-Build Coatings	High-Build Coatings	250 - 1000	CSP 3 - 5
Self-Levelling Coating	Self-Levelling Toppings	1250 - 3175	CSP 4 - 6
Screed coating	Polymer Overlays	3175 - 6350	CSP 5 - 9
Jotun repair solution - Jotafloor slurry	Concrete Overlays & Repair Materials	> 6350	CSP 5 - 10

The substrate should be mechanically prepared to leave a clean, sound, stable based on to which Jotafloor system can be applied.

Method of preparing is diamond disc grinding or dust free captive blasting. Other methods are also applicable depending on system requirement. Equipment should be connected to an industrial vacuum machine for a dust free environment.

Whichever surface preparation method is employed, ensure that the laitance and loose particles are removed from the concrete surface.

Remove all the dust formed on the surface using an industrial vacuum machine. Vacuum cleaning is also recommended before the start of each of the coat.

Once surface preparation is completed it is necessary to use the following material for concrete repairs.

Jotafloor Filler – Blow holes/Cracks up to 3 mm depth.

Jotafloor Filler Plus – Blow holes / cracks from 3 mm to 10 mm depth.

Slurry of Jotafloor SF Primer E and Jotafloor Non-slip Aggregate medium – Blow holes/cracks more than 10 mm depth.

For every 1 litre of Jotafloor SF Primer E, it is required to add 5 kgs of non Jotafloor Non-slip Aggregate medium and then mix. The mixed quantity would be in slurry form and should be applied onto the wet primer for to ensure good intercoat adhesion. It is important to consult the Jotun Technical team for any repair above 10 mm deep.

The substrate should be prepared to the appropriate tolerance or flatness level prior to the application of coating. Tolerance can be corrected; this is a separate operation which must be completed before installing floor coating.

Applicators are advised to check the tolerances of the floor before application as floor coating will follow the contours of the substrate.

### Anchor Grooves

Open the grooves approximately twice as wide and deep as the Jotafloor Moisture Guard thickness. Use a suitable double blade saw with connection to an industrial vacuum cleaner.

Open the grooves wherever a free edge of the Jotafloor Moisture Guard is possible.

Also, wherever there is a discontinuity in the Jotafloor Moisture Guard that will occur like around the perimeter of a bay, along channels, drains or expansion joints, at doorways, around the feet of machinery, plinths and columns.

A minimum of 5 cm distance is recommended from the perimeter of the walls.

The maximum distance between anchor grooves in either possible direction is 16m. If the floor is broader than 16m on either side, then extra anchor grooves will be required to be provided. If the floor size is less than 16m on either side, it is still necessary to properly provide anchor grooves at the corresponding distance.

If the room is too large to complete in a single working day, then the Jotafloor Moisture Guard should typically end at an anchor groove (Day joint). The following day's work should start at the next anchor groove. This can be decided in advance and should be cut once the day's work is planned.

### Coated surfaces

The coated surfaces should be dry, clean and sound.

When applying on coated surfaces which have past maximum over-coating time, abrading is required to achieve proper intercoat adhesion.

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## Application

Before application, it is recommended to do systematic planning with consideration of conditions, application methods, procedures, and sequences.

## Acceptable environmental conditions - before and during application

The concrete substrate should be at least 28 days old and before the application, test the atmospheric conditions in the vicinity of the substrate for the dew formation according to ISO 8502-4.

The concrete substrate moisture content should not exceed 6%.

The atmospheric Relative Humidity should not exceed 85%.

Minimum and maximum concrete substrate temperature should be 23°C and 40°C respectively.

Concrete substrate temperature should be at least 3°C above the dew point.

The pH of the concrete substrate should be 7-9.

The following restrictions must be observed:

- Do not apply the coating if the substrate is wet or likely to become wet
- Do not apply the coating if the weather is clearly deteriorating or unfavorable for application or curing
- Do not apply the coating in high wind conditions

This product should not be applied on to the surfaces which are known to, or likely to suffer from, rising dampness, potential osmosis problems or have a moisture content greater than 6%.

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## Product mixing

### Product mixing ratio (by volume)

Jotafloor Moisture Guard Comp A	3.11 part(s)
Jotafloor Moisture Guard Comp B	1.55 part(s)
Jotafloor Moisture Guard Comp C	7.55 part(s)

Avoid mixing under direct sunlight. The temperature of the paint shall be 20-30°C when the paint is mixed.

Part mixing of these components is not acceptable and will affect both performance and appearance of the finished floor.

A slow-speed mechanical mixing agitator or equivalent tool with the speed of 300-400 rpm, shall be used for mixing.

The individual components should be thoroughly stirred separately till homogenous.

The entire content of the Component B should be added to the Component A and mixed together for 1 minute till homogeneous.

Next add Comp C to the mixture and continue mixing. Ensure the Comp C is added gradually. Allow Comp C to blend for a further 2 minutes to ensure a homogenous mix is achieved.

During the operations, scrape the sides and bottom of the container with a flat or straight edge trowel to ensure complete mixing.

### Induction time and Pot life

<b>Paint temperature</b>	<b>23 °C</b>
Pot life	25 min

### Thinner/Cleaning solvent

Cleaning solvent: Jotun Thinner No. 17

**Thinning of the product is not recommended.**

## Application methods

Pour Jotafloor Moisture Guard mixed material on to the primed surface while the primer is still wet and tacky (preferably pour the mixed material within 15 minutes after the application of primer). Spread Jotafloor Moisture Guard using a steel trowel, screed bar or screed rail and compact it to the required thickness.

### Spreading (screed box spreader)

Adjust output control to desire coating thickness, pour the mixed material into the screed box, move the spreader in planned path to distribute the mixed material onto the floor (paving the floor).

### Troweling

Pour the paint on to the primed surface, then spread and level to the required thickness using a metal trowel, pin screed trowel (leveler) or notched trowel.

### Compacting

Compact the spread and levelled mixed material by pressing with steel trowel.

For fast compacting process, power float machine is recommended.

For power float detail, contact Jotun Technical Service team.

## Repair of coating system

Damages to the coating layers:

Prepare the area through sandpapering or grinding, followed by thorough cleaning/vacuuming. When the surface is dry the coating may be over coated by itself or by another product, ref. original specification.

Always observe the maximum over coating intervals. If the maximum over coating interval is exceeded the surface should be carefully roughened in order to ensure good intercoat adhesion.

Damages exposing bare Substrate:

Remove all rust, loose paint, grease or other contaminants by spot abrasive blasting, mechanical grinding, water and/or solvent washing. Feather edges and roughen the overlap zone of surrounding intact coating. Apply the coating system specified for repair.

## Film thickness per coat

### Typical recommended specification range

Dry film thickness	2000 - 5000 $\mu\text{m}$
Wet film thickness	2000 - 5000 $\mu\text{m}$
Theoretical spreading rate	0.5 - 0.2 $\text{m}^2/\text{l}$

Spreading rate depends on film thickness applied, type of texture, surface porosity, imperfections, temperature, wastage during painting etc.

\*Kindly consult Jotun sales personnel for system recommendation

## Ventilation

When coatings are applied in a confined space, artificial ventilation is required.

During application it is recommended to provide enough ventilation to have a safe work environment and to ensure that solvent concentration in the confined space at no time exceeds the maximum permitted according to local health and safety regulations.

## Drying and Curing time

<b>Substrate temperature</b>	<b>23 °C</b>	<b>40 °C</b>
Surface (touch) dry	6 h	3 h
Walk-on-dry	10 h	4 h
Dry to over coat, minimum	10 h	4 h
Dry to over coat, maximum, atmospheric	72 h	48 h
Dried/cured for service	7 d	4 d

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.

Dry to over coat, maximum, atmospheric: The longest time allowed 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.

Temperature below 23 degree C will make application more difficult and careful considerations should be given to storage of materials in cold conditions. Consult Jotun technical team for assistance in such cases.

## Maximum over coating intervals

Maximum time before thorough surface preparation is required. The surface must be clean and dry and suitable for over coating. Inspect the surface for chalking and other contamination and if present, remove with an alkaline detergent. Agitate the surface to activate the cleaner and before it dries, wash the treated area by low-pressure water cleaning using fresh water.

If maximum over coating interval is exceeded the surface should in addition be carefully roughened to ensure good inter coat adhesion.

## Equipment List

- Mixing paddle, MR3 type or equivalent
- Heavy duty slow speed drill
- Paint roller for the application of primer
- Straight steel trowel
- Spiked Shoes
- Medium-sized flat bladed screwdriver (for opening tins)
- Sharp knife (for opening bag of aggregate)
- Cleaning cloth
- Jotun Thinner 17
- Soft bristled sweeping brush or broom
- Heavy duty wire brush
- Industrial vacuum cleaner
- Concrete moisture meter

## Quality assurance

The following information is the minimum required. The specification may have additional requirements.

- Confirm that all welding and other metal work has been completed before commencing pre-treatment and surface preparation
- Confirm that installed ventilation is balanced and has the capacity to deliver and maintain the RAQ
- Confirm that the required surface preparation standard has been achieved and is held prior to coating application
- Confirm that the climatic conditions are within recommendations in the AG, and are held during the application
- Confirm that the required number of stripe coats have been applied
- Confirm that each coat meets the DFT requirements in the specification
- Confirm that the coating has not been adversely affected by rain or other factors during curing
- Observe that adequate coverage has been achieved on corners, crevices, edges and surfaces where the spray gun cannot be positioned so that its spray impinges on the surface at 90° angle
- Observe that the coating is free from defects, discontinuities, insects, abrasive media and other contamination
- Observe that the coating is free from misses, sags, runs, wrinkles, fat edges, mud cracking, blistering, obvious pinholes, excessive dry spray, heavy brush marks and excessive film build
- Observe that the uniformity and colour are satisfactory

All noted defects shall be fully repaired to conform to the coating specification.

## 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.

For further advice please contact your local Jotun office.

### 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.

### Accuracy of information

Always refer to and use the current (last issued) version of the TDS, SDS and if available, the AG for this product. Always refer to and use the current (last issued) version of all International and Local Authority Standards referred to in the TDS, AG & SDS for this product.

### Colour variation

Some coatings used as the final coat may fade and chalk in time when exposed to sunlight and weathering effects. Coatings designed for high temperature service can undergo colour changes without affecting performance. Some slight colour variation can occur from batch to batch. When long term colour and gloss retention is required, please seek advice from your local Jotun office for assistance in selection of the most suitable top coat for the exposure conditions and durability requirements.

### Reference to related documents

The Application Guide (AG) must be read in conjunction with the relevant specification, Technical Data Sheet (TDS) and Safety Data Sheet (SDS) for all the products used as part of the coating system.

When applicable, refer to the separate application procedure for Jotun products that are approved to classification societies such as PSPC, IMO, SSPC etc.

## Symbols and abbreviations

min = minutes

h = hours

d = days

°C = degree Celsius

° = unit of angle

µm = microns = micrometres

g/l = grams per litre

g/kg = grams per kilogram

m<sup>2</sup>/l = square metres per litre

mg/m<sup>2</sup> = milligrams per square metre

psi = unit of pressure, pounds/inch<sup>2</sup>

Bar = unit of pressure

RH = Relative humidity (% RH)

UV = Ultraviolet

DFT = dry film thickness

WFT = wet film thickness

TDS = Technical Data Sheet

AG = Application Guide

SDS = Safety Data Sheet

VOC = Volatile Organic Compound

MCI = Jotun Multi Colour Industry (tinted colour)

RAQ = Required air quantity

PPE = Personal Protective Equipment

EU = European Union

UK = United Kingdom

EPA = Environmental Protection Agency

ISO = International Standards Organisation

ASTM = American Society of Testing and Materials

AS/NZS = Australian/New Zealand Standards

NACE = National Association of Corrosion Engineers

SSPC = The Society for Protective Coatings

PSPC = Performance Standard for Protective Coatings

IMO = International Maritime Organization

## 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.