

Jotafloor PU Universal

Product description

This is a two component aromatic isocyanate cured polyurethane coating. It is a high performance, solvent free product. It is a self levelling product leaving a seamless surface. It is flexible, abrasion, impact, chemical and slip resistant. It is specially designed to be used as a waterproof membrane. If enhanced slip resistance is required Jotafloor Non Slip can be used in the system. To be used as mid coat as part of a complete system in atmospheric environments. Suitable on approved primers on concrete substrates.

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 and SSPC Standards. When using standards from other regions it is recommended to reference only one corresponding standard for the substrate being treated.

Application

Acceptable environmental conditions - before and during application

All cementitious 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 moisture content should not exceed 5%.

The Relative Humidity should not exceed 80%.

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

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

The PH of the concrete should be 7-9.

The following restrictions must be observed.

- Only apply the coating when the substrate temperature is at least 3°C above the dew point
 - 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
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Surface preparation

The required quality of surface preparation can vary depending on the area of use, expected durability and if applicable, project specification.

Preferred surface profile for Jotafloor Pu universal is CSP2-CSP5 as per the ICRI guideline mentioned in 310.2R. 2013.

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

Preferred method of abrading the substrate is diamond disc grinding or dust free captive blasting. Both the equipment should be connected to an industrial vacuum machine for a dust free environment. Whichever surface preparation method is employed, ensure that the laitance (powdery material on the concrete surface) and loose particles are removed from the concrete surface.

After the surface preparation is completed, remove all the dust formed on the surface using an industrial vacuum machine.

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 PR 150 and Non -slip aggregate medium – Blow holes/cracks more than 10 mm depth.

For every 1 litre of JF SF PR 150 it is required to add 6-7 kgs of non - slip aggregate medium and then mix. The mixed quantity would be in solid form and should be applied on to the wet primer for adhesion. It is important to consult the Jotun Technical team for any repair above 10 mm deep.

Coating should not be relied upon to improve the tolerance's or flatness levels in the substrate. The substrate should be prepared to the appropriate tolerance prior to the application of coating. Tolerance's can be corrected, moreover this is a separate operation which must be completed before installing the coating. Coating will generally follow the contours of the substrate and have the same tolerance's as the substrate to which it is applied. Applicators are advised to check the tolerances of the substrate before they begin with the preparation.

Product mixing

Product mixing ratio (by volume)

Jotafloor PU Universal Comp A	4.4 part(s)
Jotafloor PU Universal Comp B	1 part(s)

NO PART MIXING.

Use a slow speed drill and mixing paddle.

Pour the full contents of the mixed material onto the floor immediately after mixing is completed.

The temperature of the base and curing agent is recommended to be 18 C or higher when the paint is mixed.

Component A should be thoroughly stirred before component B is mixed. Mix both the components using a slow speed drill and mixing paddle for 2 minutes. The entire content should be poured on to a third container & edges of the container should be scrapped. Mix the material for more 20 second. Do not add solvent thinners at any time.

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

Mixing should be carried out using a heavy duty, slow-speed drill with appropriate mixing paddle attachment. The individual components should be thoroughly stirred to disperse any settlement, then the Comp A and Comp B packs should be mixed together. The entire contents of the hardener (B) container should be added to the base (A) and mixed together for two minutes until a homogeneous mix is obtained. When a homogenous state

has been achieved split the mixed paint in to two separate containers and continue mixing both portions of the mix for a further 2 minutes.

Induction time and Pot life

Paint temperature	23 °C
Induction time	3 min
Pot life	15 min

The temperature of base and curing agent is recommended to be 18 °C or higher when the paint is mixed.

Thinner/Cleaning solvent

Cleaning solvent : Jotun Thinner No. 10

Thinner not to be used to dilute the product.

Application data

Apply Jotafloor SF PR 150 at required thickness. Broadcast Jotun Anti Slip Grain Medium onto the wet primer at a rate of 0.5KG per SQ/M for higher anchorage. Prior to the application of the Jota floor PU Universal, the primed surface should be thoroughly cleaned to remove any traces of dust or other debris.

Apply Jotafloor PU Universal to the Jotafloor Primer using a trowel, pin screed or rubber squeegee to achieve the required thickness ensuring that the surface is fully covered and that no ponding of the material occurs. For a thickness of 500 microns apply it at 2 sqm/ litre, 1 sqm/litre for 1000 microns and 0.5 sqm/litre for 2000 microns.

Whilst the Jotafloor PU Universal is still wet, broadcast with Jotun Anti Slip Grain Medium at a rate of 1KG per Sq/m.

Jotafloor PU top coat

Jotafloor PU Universal should always be top coated with Jotafloor PU Top Coat or Jotafloor PU Top Coat Hs. Please refer to the application guide of Jotafloor PU Top Coat or Jotafloor PU Top Coat Hs for its mixing and application.

Ventilation

Sufficient ventilation is very important to ensure proper drying/curing of the film.

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 clean and 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 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	500 - 3000 µm
Wet film thickness	510 - 3061 µm

Theoretical spreading rate 2 - 0.33 m²/l

Drying and Curing time

Substrate temperature	23 °C	40 °C
Surface (touch) dry	6 h	3 h
Walk-on-dry	16 h	8 h
Dry to over coat, minimum	16 h	8 h
Dry to over coat, maximum, atmospheric	36 h	24 h
Dried/cured for service	7 d	3 d

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.

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 jetting to Wa 1 (ISO 8501-4) using fresh water.

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

Areas for atmospheric exposure

Average temperature during drying/curing	23 °C	40 °C
Itself	2 d	1 d
polyurethane	2 d	1 d

Adding anti-skid to the coating system

Anti skid should only be added in the final coat and not used in a single coat system direct to the surface. Spread the Jotafloor Non-slip Aggregate on the surface before half of time to Surface dry. The recommended usage is 2.5 - 3.3 kg per 10 litres of paint.

Equipment List

- Mixing paddle, MR3 type or equivalent
- Slow speed drill
- Paint rollers
- Cleaning cloth
- Medium-sized flat bladed screwdriver (for opening tins)
- Jotun Thinner 17 for cleaning
- Soft bristled sweeping brush or broom
- Heavy duty wire brush
- Diamond disc grinding machine
- Captive Blasting machine
- Industrial vacuum cleaner

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

m²/l = square metres per litre

mg/m² = milligrams per square metre

psi = unit of pressure, pounds/inch²

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

Application Guide

Jotafloor PU Universal



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.