

Jotafloor PU Ultra

Product description

This is a two component high volume solid, LEED compliant, isocyanate cured aliphatic polyurethane coating with superior elongation. It complies fully with the properties of ASTM C 957 and is a high performance elastomeric product with superior crack bridging properties. It is a non-yellowing product and has excellent gloss and color retention. It has good chemical, abrasion and impact resistance. If enhanced slip resistance is required Jotafloor Non Slip Aggregate can be used in the system. 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. Jotun's 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 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 4%.

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 Ultra 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 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 Ultra Comp A	1 part(s)
Jotafloor PU Ultra Comp B	1 part(s)

NO PART MIXING.

Use a slow speed drill and mixing paddle.

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

Jotafloor PU Ultra is a two-component supplied as the base (Component A) and the hardener (Component B). Add the entire contents of the Component B to the base Component A and mechanically mix for the two components for 2 minutes.

Induction time and Pot life

Paint temperature	23 °C
Induction time	3 min
Pot life	25 min

Thinner/Cleaning solvent

Cleaning solvent: Jotun Thinner No. 10

Application data

Roller application

Jotafloor PU Ultra should be applied only over one of the approved primers, which are either Jotafloor SF PR 150, Jotafloor Sealer or Jotafloor Sealer HS.

Under no circumstances should Jotafloor PU Ultra be applied to the concrete substrate which has absorbed the sealer or primer fully. For highly porous concrete substrate an additional coat of sealer or primer will be required to seal the concrete substrate fully.

To achieve a texture finish, broadcast Jotafloor Nonslip Aggregate Medium over wet Jotafloor SF PR 150, or after a second coat of Jotafloor Sealer HS at 0.5 kgs/sqm.

Apply the first layer of Jotafloor PU Ultra using a roller at 6 sqm/litre to achieve a desired thickness of 150 microns DFT. To achieve a desired thickness of 200 microns, apply it at 4.5 sqm/litre.

After the application of second coat using a dry roller apply a finishing coat to minimize the roller marks.

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	150 - 200	µm
Wet film thickness	165 - 220	µm
Theoretical spreading rate	6 - 4.5	m ² /l

Drying and Curing time

Substrate temperature	23 °C	40 °C
Surface (touch) dry	6 h	4 h
Walk-on-dry	36 h	24 h
Dry to over coat, minimum	24 h	24 h
Dry to over coat, maximum, atmospheric	5 d	3 d
Dried/cured for service	7 d	7 d

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

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.

Areas for atmospheric exposure

Average temperature during drying/curing	23 °C	40 °C	
Itself	3 d	2 d	1 d
Polyurethane	3 d	2 d	1 d

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

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.