Jotachar JF750

Product description

This is a two component solvent free amine cured 100 % solids epoxy intumescent coating. Specially designed as an intumescent coating to provide fire protection for steel in hydrocarbon pool and jet fires for different types of structures and equipment. No additional reinforcing mesh is required. To be used as mid coat as part of a complete system in atmospheric environments. Suitable on approved primers on carbon steel, aluminum, hot dipped galvanized steel and stainless steel substrates, subject to certification.

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

Surface preparation

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

The surface preparation requirements for metallic substrates are relevant for the primer specified.

When preparing new surfaces, maintaining already coated surfaces or aged coatings it is necessary to remove all contamination that can interfere with coating adhesion, and prepare a sound substrate for the subsequent product.

Inspect the surface for hydrocarbon 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 using fresh water.
Paint solvents (thinners) shall not be used for general degreasing or preparation of the surface for painting due to the risk of spreading dissolved hydrocarbon contamination. Paint thinners can be used to treat small localised areas of contamination such as dye penetration inks and marker pens. Use clean, white cotton cloths that are turned and replaced often. Do not bundle used solvent saturated cloths. Place used cloths into water.

In the case of surface preparation, the requirements of the Jotachar TDS / AG should be used instead of the corresponding primer TDS / AG.

Process sequence

Surface preparation and coating should normally be commenced only after all welding, degreasing, removal of sharp edges, weld spatter and treatment of welds is complete. It is important that all hot work is completed before coating commences.

Soluble salts removal

Soluble salts have a negative impact on the coating systems performance, especially when immersed. Jotun recommends the following maximum soluble salts (sampled and measured as per ISO 8502-6 and -9) content on a surface; 80 mg NaCl / m² unless otherwise specified.

Carbon steel

Metal finishing

Surface laminations and sharp edges should be removed, sharp edges must be rounded off smooth prior to priming. Weld spatter, or flux, dust and spent abrasive and all contamination must also be removed before primer application. Ensure substrate is clean and dry before painting.

Abrasive blast cleaning

Abrasive blasting should not take place under adverse ambient conditions, when relative humidity exceeds 85 % or when the steel temperature is less than 3°C (37°F) above ambient dew point.

Cleanliness

After pre-treatment is complete, the surface shall be dry abrasive blast cleaned to Sa 2½ (ISO 8501-1) using abrasive media suitable to achieve a sharp and angular surface profile.

Surface profile

Measure the achieved profile with surface replication tape (Testex) to ISO 8503-5 or by surface roughness stylus instrument to ISO 8503-4.

Achieved surface roughness should be as required by specified primer. The recommended surface profile is 50-75 µm, grade Fine to Medium G; Ry 5 (ISO 8503-1). However, this profile should not be less than figures stated below for carbon steel and alloys. Finished surfaces shall be dull, profiled and show no areas of shiny metal. Do not handle the prepared surface with bare hands.

Compressed air quality

To avoid contaminating the substrate, the dryness and cleanliness of the compressed air supply used for blast cleaning should be verified by testing the air on a white blotter as per ASTM D4285.

Dust contamination

At the completion of abrasive blasting remove residues of abrasive media and inspect for surface particulate contamination. Maximum contamination level is rating 1 (ISO 8502-3) as per Figure 1 of the standard for dust size no greater than class 2.

Wet abrasive blast cleaning

Wet abrasive blasting is an acceptable method of surface preparation. Surface profile and cleanliness shall be as mentioned above. Optimum performance is achieved with preparation grade SSPC SP-10 (WAB)/NACE WAB-2, near white metal wet abrasive blast cleaning. Maximum accepted flash rust grade is Moderate (M). A qualified wet blast primer must be used with this method of surface preparation.
The recommended primer is Jotamastic 90.

Hydro-blasting (high pressure water jetting)

Hydro-blasting may be an acceptable method of surface preparation when abrasive blast cleaning is prohibited or not possible. However, this is acceptable only if an adequate surface profile is revealed as per the requirements stated above. Where a suitable surface profile is not revealed, abrasive blasting will be required. High pressure water jetting does not remove mill scale or create surface roughness, and is only useful for surfaces with an initial roughness suitable for the subsequent coat. Best performance is achieved with preparation grade Wa 2½ (ISO 8501-4). Maximum accepted grade of flash rust for any preparation is FR M (ISO 8501-4).

Alternatively minimum approved preparation grade is SSPC-SP WJ-2/ NACE WJ-2, very thorough cleaning. Maximum accepted flash rust grade is Moderate (M).

A qualified wet blast primer must be used with this method of surface preparation. The recommended primer is Jotamastic 90.

Hand and Power Tool Cleaning

Power tool cleaning

Power tool cleaning is not acceptable as a primary surface preparation for steel. It is only recommended for small areas of repair, typically less than 1 m² in size where abrasive blasting is expected to create more damage to the coating system than actual benefit to the performance of the coating system.

Power tool cleaning to St 3 (ISO 8501-1) with 50 µm surface profile or as prescribed in SSPC SP11 with 50 µm surface profile. Removal of all loose mill scale, loose rust, loose paint and other loose detrimental foreign matter to a bare metal finish with a surface profile.

In areas where blasting is not feasible or permitted, power tool surface preparation can be acceptable provided a surface profile of 50 µm is achieved. Power tool cleaning is not acceptable for projects required to comply with NORSOK M-501 without an accepted deviation from the project team.

Overlapping zones to intact coating shall have all leading edges feathered back by sanding methods to remove all sharp edges and establish a smooth transition from the exposed substrate to the surrounding coating. Consecutive layers of coating shall be feathered to expose each layer and new coating shall always overlap to an abraded existing layer. Abrade intact coatings around the damaged areas for a minimum 100 mm to ensure a mat, rough surface profile, suitable for overcoating.

DO NOT power tool clean aluminium or stainless steel substrates.

Galvanised steel

Abrasive blast cleaning

After removal of excess zinc and surface defects the area to be coated shall be degreased to ISO 12944-4, Part 6.2.4 Alkaline Cleaning. The galvanised surface shall be sweep blast-cleaned (SSPC-SP 16) with the nozzle angle at 45-60° from perpendicular at reduced nozzle pressure to create a sharp and angular surface profile using approved non-metallic abrasive media. As a guide, the surface profile should not be less than 50 µm (2 mils). Finished surfaces shall be dull, profiled and show no areas of shiny metal. Do not handle the prepared surface with bare hands.

Galvanized bolts should be degreased in case of oil/grease contamination, abraded for surface roughening, solvent cleaned, followed by application of approved primer.

Thermally sprayed zinc (TSZ) may be coated after the use of an approved epoxy tie coat, applied soon after initial application of TSZ. TSZ which has been exposed to high humidity or outdoor weathering, may have zinc salts (white rust) formation on the surface which is detrimental to adhesion. Zinc salts must be removed prior to application. Use high pressure water-washing at a minimum of 170 bar (2500 psi) to remove zinc salts. Approved epoxy tie coat to be applied when dry.

Aluminium

Abrasive blast cleaning

After pre-treatment is complete, the surface shall be sweep blasted (brush off) to cleanliness corresponding to Sa 1 (ISO 8501-1) using non-metallic, abrasive media which is suitable to achieve a sharp and angular surface profile. Sweep (brush off) blast cleaning is defined as; the removal of all loose mill scale, loose rust and loose coating with abrasive blast cleaning. As a guide, the surface profile should not be less than 50 µm (2 mils).

Stainless steel

Abrasive blast cleaning

After pre-treatment is complete, the surface shall be sweep blasted (brush off) to cleanliness corresponding to Sa 1 (ISO 8501-1) using non-metallic, abrasive media which is suitable to achieve a sharp and angular surface profile. Sweep (brush off) blast cleaning is defined as; the removal of all loose mill scale, loose rust and loose coating with abrasive blast cleaning. As a guide, the surface profile should not be less than 50 µm (2 mils).

Chlorinated or chlorine containing solvents or detergents must not be used on stainless steel.

Coated surfaces

Verification of existing coatings including primers

When the surface is an existing coating, verify with technical data sheet and application guide of the involved products, both overcoatability and the given maximum overcoating interval. Only approved and qualified primers can be used in conjunction with the Jotachar product range. It is the application contractor's responsibility to ensure that only approved primers are used. For the current list of approved primers please contact your local Jotun office.

The applied primer should be:
• Dry and cured enough to stand for overcoating, as per minimum overcoating time stated on manufacturer's TDS
• Maximum overcoating period as per Jotun approved primer Application Guide (AG) or contact your local Jotun office
• Strongly adhered to the steel substrate
• Free from any damage, defects or contamination (including oil, grease, soluble salts and dust)
• Uniform in thickness and within the recommended DFT range. It is important to apply the approved primer systems carefully according to the specified DFT as over thickness could affect the performance of the passive fire protection system

Some primers may have a semi gloss finish. The higher gloss level of these primers will mean a reduction in the achievable wet film thickness of the 1st coat of Jotachar. A test area should be applied to determine the achievable wet film thickness of the first application. Reduction of gloss by sanding can improve coating build up.

Primer system maximum dry film thickness

As a general guideline the following maximum dry film should be adhered to.

Primer system:

Epoxy, including epoxy zinc phosphate
Typical specification:
- Dry Film Thickness: 50-100 µm (2-4 mils)
- Max in overlaps: 150 µm (6 mils)

Zinc epoxy
- Dry Film Thickness: 50-75 µm (2-3 mils)
- Max in overlaps: 100 µm (4 mils)

Zinc epoxy and epoxy tie coat
- Dry Film Thickness: 75-110 µm (3-4.4 mils)
- Max in overlaps: 125 µm (5 mils)

During new construction or maintenance projects, exemption to general guidance for primer dry film thickness may be acceptable under certain scenarios after review with Jotun. Limited to hydrocarbon pool fire only and with in-service steel temperatures greater than -10°C (14°F) and less than 60°C (140°F).
An approved epoxy primer may be applied up to:
- Dry Film Thickness: 150 µm (6 mils)
- Max in overlaps: 300 µm (12 mils)

Dry film thickness and overcoating periods as per manufacturer's instructions must be strictly observed.

It is the responsibility of the PFP applicator installing any version of Jotachar to assess the condition of the primer coating before Jotachar is applied. Any defective areas must be repaired prior to application of Jotachar.

Primer thickness should be carefully monitored and controlled, especially in areas of difficult access where multiple spray passes are unavoidable, such as internal angles.

Refer to your Jotun representative for a fire specification and approved primer system.

Reduction of high primer thickness

Areas of high primer thickness should be reduced to the recommended thickness as per the above guideline

using medium grade sandpaper, grinding or other suitable methods followed by fresh water washing to remove dust/contaminants. Frequent changes of abrasive paper to be made to avoid polishing the surface. Abrasive sweep blasting followed by thorough cleaning/vacuuming can also be used.

Ensure the surface is clean and dry before application of Jotachar.

Over coating

The primer manufacturer and Jotun should be consulted for minimum and maximum recommended overcoating times. Refer to specific product technical data sheet for details.

Organic primers/intermediates

Clean, dry and undamaged compatible coating (ISO 12944-4 6.1.4)

Shop primers

Shop primers are accepted as temporary protection of steel plates and profiles. As long as the shop primer is dry, clean, intact and not damaged it is possible to apply this product over the shop primer. However, if the shop primer is not in sound condition or damaged the shop primer should be completely removed by blast cleaning to minimum Sa 2½ (ISO 8501-1) to a surface profile as recommended.

Inorganic zinc silicates

Zinc silicate primers are generally discouraged due to their weak cohesive strength and inconsistency of film. An epoxy tie coat is to be applied onto the properly cured zinc silicate. Consult with Jotun Technical Sales Support.

Due to the special properties of inorganic zinc silicate primers the following should be considered:
• The applied film of inorganic zinc silicate should be fully cured. Curing should be verified by MEK test in accordance to ASTM D4752 with a minimum resistance rating of "4". The MEK test measures curing in the surface of the primer. To ensure complete curing throughout the film additional Coin Test is recommended. The film is scraped harshly with a coin. The coin shall produce a shiny mark without any loosened zinc.
• The maximum dry film thickness of inorganic zinc silicate should not exceed 75 µm
• An epoxy tie-coat must be used, 25 µm dry film thickness is recommended
• Mechanical damages at edges or mud cracking at corners should be repaired using a zinc rich epoxy

Application

Apply the approved primer within 4 hours of completing the blasting, before degradation of the surface occurs. Jotun highly recommends that Jotachar JF750 is applied by heated twin feed spray (plural component) equipment to ensure high productivity and minimum wastage.

It is possible to apply Jotachar directly to blasted steel, provided environmental controls and relevant project approval allows it. Apply within 4 hours of completing the blasting, relative humidity <60 %, substrate temperature >15 °C (59 °F) and at least 3 °C (5 °F) above the dew point, before degradation of the of the surface. Classification Society certification typically require 50 µm DFT of epoxy primer.

ALL SPRAY EQUIPMENT USED WITH JOTACHAR JF750 MUST BE APPROVED BY JOTUN TECHNICAL SALES SUPPORT TEAM

Coat backs and project detailing

The application of fire protection would typically extend to the unprotected or secondary steelwork in order to prevent heat transfer during a fire situation into the fire protected primary steel work. The point of measuring this extension (coatback) is the point of contact of protected with unprotected steel work. Whilst there is no specific standard relating to coatbacks, a coatback distance for all secondary attachments to primary members should be considered.

Project coatback requirements differ due to many factors including coat back optimization, Classification or Code of Practice requirements which will require clarification with the project. This judgement should be made by the Client and or their safety consultants who may consider thermal modelling to determine affects within the heat affected zones.

In case of pipe racks, API 2218 (3rd edition) states that "If conduction into primary beams is a concern the fireproofing can be extended back 18 in. (450 mm) from the primary beams.

The FABIG Design Guidance for Hydrocarbon Fires technical note 13 (September 2014) advises "Industry practice has been to apply coatback on all secondary members and attachments, including plate steel, for a minimum distance of 450mm from the joint with a primary member or separating element being protected."

"For small attachments such as brackets for cable trays, instrument piping and handrails, the cross sectional area will be small and the resultant heat transfer is not significant. Therefore, assuming these do not cumulatively exceed 3000 mm² cross sectional area per metre length of primary steel section or per square metre of surface area, then they generally do not need to be coated."

Typical industry norms for offshore projects is 450mm (18 in.) coatback distance for fire resistive divisions and structural members. Coatback is often excluded for small attachments, typically <3000 mm² (<1000 mm² and <500 mm² are other values used).

For projects following Norsok Standard, Norsok S-001 (2020) states that "If the contact area including the cross-sectional area inside hollow sections of an unprotected structural element is equal or larger than 1,000 mm², or for several attachments with total contact area of 1,000 mm² per square meter of fireproofed (main) structural elements, the need for coatback shall be evaluated. It is not expected that the coatback distance in any case needs to be more than 150 mm.

If a different coat back distance is required by the project specification or classification societies, consultation with the design engineers or classification society should be considered.

In the case of pipe racks or beams supporting gratings, some project specifications may call for 3-sided protection, whereby the top flanges are unprotected. Statement from PFPNet is this should only be done after engineering assessment has shown it to be a credible mitigation option that will provide the required structural performance. Otherwise 4-sided protection can be applied.

Appropriate procedures should be considered early enough in the design phase and agreed on between all concerned parties to ensure correct terminations of Jotachar at the top flange.

For technical drawings of coat backs, repairs of other PFP materials and beams supporting gratings, please consult Jotun Technical Sales Support.

Acceptable environmental conditions - before and during application

Before application, test the atmospheric conditions in the vicinity of the substrate for the dew formation according to ISO 8502-4.

Air temperature	5 - 50	°C
Substrate temperature	5 - 60	°C
Relative Humidity (RH)	10 - 85	%

The following restrictions must be observed:

- Only apply the coating when the substrate temperature is at least 3 °C (5 °F) 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 unfavourable for application or curing
- Do not apply the coating in high wind conditions

Jotachar JF750 may be applied at lower ambient temperature, down to a minimum of 5 °C (41°F). Be aware that this will result in extended drying, curing and overcoating times. Additionally there may be an increased tendency for amine bloom formation during curing which will affect overcoating with topcoats. For application conditions below 10 °C (50 °F) (Air & Steel temperature), the application of an approved tie coat may be recommended before the application of a topcoat.

Material storage conditions

Jotachar JF750 should be stored in sealed containers, away from direct sunlight and high humidity.
The following are the recommended storage temperature ranges:
- General storage
- 1 ºC (33 °F) minimum and 35 ºC (95 °F) maximum
- Pre-heating for plural component spray application
- 25-35 ºC (77-95 °F) for minimum 12 hours prior to use

Protect the product from frost.

Uniform heating of the material is required. Heaters in direct contact with the containers are not recommended, as it may overheat the outer layers of Jotachar JF750 in the container, changing its properties. At temperatures below 20 °C (68 °F) it is recommended to also place the spray unit in a heated, insulated container. Pre-heating the material to 30 °C (86 °F) is required at lower ambient temperature. In cold weather it is recommended to also place the spray unit in a heated, insulated container.

Product mixing

Premixing and 'thinning' is required for application with a single leg airless spray pump. A small amount of Jotun Thinner No. 7, Jotun Thinner No. 10 or No. 17 is added (maximum 5 %) to reduce viscosity for mixing and spraying.
A high torque variable speed, paddle paint mixer (mounted on a power ram base) is required for mixing.

At ambient temperature below 20 °C (68 °F) , it is recommended to pre-heat the material up to 25-30 °C (77-86 ºF) prior to mixing.

Up to 1 litre of thinner may be used per 20 kg kit of the Jotachar product. Add this into Component A and mix thoroughly. Add thinner accurately, do not add "by eye". Add component B into the component A container, scraping the sides of component B container to empty it completely. Always mix full kits when spraying.
Mix the two components together until a uniform grey coloured material is obtained. During mixing, care should be taken to scrape the material from the walls of container into the center.

Care should be taken not to mix more material than can be applied within the pot life of the product.
The volume solids of this Jotachar product is 100 %. In the case of 1 litre thinning, the new volume solids will be 95 %. This should be taken into account when measuring wet film thickness and calculating dry film thickness.

Product mixing ratio (by weight)

Jotachar JF750 Comp A	1 part(s)
Jotachar JF750 Comp B	1 part(s)

Product mixing

Individual components must have been stored for minimum 12 hours at 25 to 30 °C (77 to 86 °F). Stir/mix thoroughly with a power agitator before application.

The above is true by weight and by volume.

Induction time and Pot life

Paint temperature	15 °C	23 °C
Pot life	45 min	40 min

The given figures are for trowel and roller workability.
Working pot life is not applicable for plural airless spray application as the material is mixed at the spray gun during application. For single leg airless spray and manual application, mixed material should be applied with minimum delay. Due to exothermic reaction, the larger the volume of mixed material, the shorter the pot life will be.

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

Thinner/Cleaning solvent

Thinner:	Jotun Thinner No. 7 / Jotun Thinner No. 17 / Jotun Thinner No. 10
Thinning max.:	5 %

Thinning is typically 5 % by volume for modified airless spray and manual application.
For rolling, use Jotun Thinner No. 7 or Jotun Thinner No. 17.

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

Thinner in excess of 5 % is not recommended.

Cleaning solvent: Jotun Thinner No. 17

Application data

Spray application

It is possible to apply Jotachar JF750 in one coat of up to 10 mm thickness using a continuous application process. However, a typical applied thickness of 6 mm is recommended as this affords the optimum compromise between film build, finish and thickness control. Subsequent applications are typically carried out after 60 minutes, subject to current ambient environmental conditions.

After spraying, immediately flush out the mixed material from the static mixer and spray line (whip end) with hot water using the flushing pump. For long time storage or maintenance of the spray unit it is recommended to use Jotun Thinner No. 17 to dissolve and flush out the material residues.

In a continuous spray application process lasting typically 2 hours, replacement of the static mixer with a freshly cleaned one is recommended to ensure ease of application.

Masking

Any surfaces or equipment in the spraying areas that do not require fireproofing must be masked-off using plastic sheeting or equivalent. Regardless of the structural configuration being protected, overspray should always be considered. Overspray onto surfaces must be removed before the material cures. Application on top of overspray is not acceptable. Masking should be done to protect the surrounding area in a square or rectangular shape.

Airless Spray Equipment

Pressure at nozzle (minimum) :	200 bar/2900 psi
Nozzle tip (inch/1000) :	31-41

Several factors influence, and need to be observed to maintain the recommended pressure at the nozzle. Among factors causing pressure drop are:
- extended hoses or hose bundles
- extended hose whip-end line
- small internal diameter hoses
- high paint viscosity
- large spray nozzle size
- inadequate air capacity from compressor
- incorrect or clogged filters

For smaller to moderate sized projects, a modified single leg airless spray unit can be used.
The following instructions are specified for this product application using single leg airless spray and must be strictly followed.

Modified Single Leg Airless Spray Equipment:
Modified single leg airless spray pump can be used for the application of this product dependent on the following criteria being met;
• Minimum 73:1 pumping ratio
• Equipped with ram feed plate and wiper to fit the size of the drum
• The recommended fluid line I.D. is ¾" and the length should not exceed 15 m (50 feet)
• A whip end line of ½" I.D. and 4.5 m (15 feet) length can be added to the spray line
• A 30-50° fan angle and 0.031" to 0.041" orifice spray tips are recommended

When using modified single leg airless spray equipment ensure the pump, lines and gun are fully flushed with Jotun Thinner No. 17 after spraying stops for a prolonged period.

Jotun should always be consulted regarding the suitability of any proposed equipment.

Plural component (Twin Pump) airless spray equipment

Spray application should not start unless the weight ratio check is within ± 10 % of the designated ratio.
After checking and confirming acceptability of the mix ratio, it is not recommended to alter or change any of the operating parameters of the plural spray unit except the metering pump air motor inlet pressure.
Proper atomisation should be achieved by adjusting the metering pump pressure within 200–320 bar (2900-4600 psi).

Spray application should be performed with the spray gun at right angles to the substrate. Apply in parallel paths, overlapped at 50 %, with constant speed and distance in order to achieve a uniform thickness.
The spray unit delivers a high volume of material (up to 345 cm^3 per cycle), the crew size should be large enough to finish the sprayed material surface by trowelling or rolling when required.

The following instructions are specified for Jotachar JF750 application using plural component spray equipment and should be strictly adhered to.

Spray equipment:
A compact unit consisting of the following major components;
• Metering pump with two equal sized liquid ends or legs, one leg for component "A" and one for component "B" (fixed ratio equipment, e.g. WIWA Duomix 333PFP, Covercat PFP)
• Two metering pumps with one liquid end or leg, one for component "A" and one for component "B" (Digital variable ratio equipment e.g. Graco XM PFP)
• Two ram assisted shovel airless supply pumps, one for each component
• Two heated and pressurised storage tanks equipped with pneumatic or electrical agitators that have mixing blades to cover the height of the tank, one for each component
• In-line electrical heaters to heat up the material components.
• Hot water circulation
• Flush pump
• Insulated heated spray line
• Remote mixing manifold and static mixer
• High pressure spray gun
• High pressure safety shut down system

Some units are also equipped with the following:
• Ratio monitoring system to shut down the unit when metering pump is out of ratio
• Optical level control for the material tanks with automatic refill

Jotun should always be consulted regarding the suitability of any proposed equipment. Refer to TSS-TI-107 Recommended EPFP and insulation Pump List.

Operating parameter summary

Component tank temperatures	Component A: 40-45 °C (104-113 °F) Component B: 45-50 °C (113-122 °F)
Component tank pressures	Component A: 2.5-4.15 bar (36-60 psi) Component B: 3-5 bar (43.5-72.5 psi)
Component tank stirrer speed	Component A: 6-10 rpm Component B: 6-10 rpm
In-line heater temperatures	Component A: 45-50 °C (113-122 °F) Component B: 50-55 °C (122-131 °F)
Hose heater temperature	60 - 70 °C (140 - 158 °F)
Temperature at nozzle	40 - 50 °C (104 - 122 °F)
Metering pump pressure	200 - 320 bar (2900 - 4600 psi)
Nozzle tip (inch/1000) :	31-41 orifice 30-50 fan angle

The purpose of tank pressure is to force the material from the tank to the main pump leg. Higher tank pressures will affect the applied density, due to higher compression of the material.

The above setting parameters of tank temperatures, tank pressures and stirring speeds are for guidance only. Settings may vary depending on ambient conditions and equipment used. It is recommended that the correct settings are determined for the equipment to be used prior to starting main application work on a project.

Film density

The film density of epoxy intumescent materials can vary with manual and spray application. Different

equipment setup and/or application technique can result in higher film densities and higher material consumption. Factors to consider include agitation of material in the pressurised holding tanks. Fill level within the holding tanks must be maintained below the highest point of the blade/paddle element of the stirring mechanism. Material temperature, tank pressures and stirrer speed must be maintained as per recommended operating parameters. Contractor should discuss with the equipment supplier for individual set up required to achieve best application qualities. Higher or lower density within the given range for Jotachar JF750 is not detrimental to product performance.

Target film density:
Plural Component Spray 1.0 ± 0.1 g/cm³ (ISO 1183:1987 Method A)
Manual / Single leg airless 1.2 ± 0.1 g/cm³ (ISO 1183:1987 Method A)

Note: Applied density values are typical and are provided for guidance only.

Factors that may contribute to higher consumption of epoxy fire protection:

- Over application of material DFT (regular WFT checks will help control)
- Uneven film build (none uniform spraying)
- Incorrect pump settings (material temperature, tank pressures, stirrer speeds)
- Incorrect pump set-up
- Poor equipment maintenance
- Wastage (over spray, frequency of washing out, stop/start application and spraying into tins)
- Poorly calibrated inspection equipment (always calibrate equipment close to the specified DFT)

Weight ratio check

Weight ratio checks procedure:
- The ratio check should only be performed once both components have attained the required temperatures to spray
- Set the metering pump air motor pressure to 2.8 bar (40 psi)
- Empty approximately 10-15 kg of component A and 10-15 kg of component B into separate, clean containers from the pressure release (dump) valves located on the mixing block, in order to remove any cold material from the lines. (This material can be used again, either back into machine or hand application)
- Weigh clean, empty containers for components A and B and record the weights
- Place the containers under the ratio check valves and open the valves at exactly the same time
- Close the valves when the Component A container is at least half full. Valves should be closed at exactly the same time
- Calculate the net weight of each component by subtracting the weight of the empty containers
- Calculate the ratio of Part A to Part B as a percentage of the total weight

Note: Methods of taking ratio checks may vary. Please follow the machine manufactures guidelines.

Weight of empty container	Component A :	a (kg)
	Component B :	b (kg)
Weight of container, including product	Component A :	c (kg)
	Component B :	d (kg)

$$\text{Weight ratio A/B} = \frac{c - a}{d - b} = X/1$$

The acceptable mix ratio range of component A to component B is ± 10 % of designated ratio

- 0.90 : 1 minimum
- 1.10 : 1 maximum

In addition to the ratio checks, it is also important to constantly check metering pump pressure gauges and the grey colour shade of the mixed Jotachar product.

Spray application technique

This product can be applied at 3-5 mm thickness per coat using modified single leg airless depending on the material temperature, the thinning percentage, ambient and substrate temperature.
Spray application should be performed with the spray gun at right angles to the substrate. Apply in parallel paths, overlapped at 50 %, with constant speed and distance in order to achieve a uniform thickness.

Rolling the material with a short nap roller slightly dampened with Jotun Thinner No. 7, Jotun Thinner No. 10 or No. 17 solvent will remove trowel marks, high points and can also be used to obtain a smooth finish.
Rolling of the first coat should be concentrated inside beam corners, on beam toes and difficult to spray areas.
Rolling should be conducted within 30 minutes of spray application.

Trowelling may not be required providing that the material atomisation is sufficient to achieve a consistent and even spray fan without fingering.
Trowelling should be conducted within 30 minutes of spray application.

Other application tools

Manual application

Jotachar JF750 can be applied manually, e.g. by trowel. The following instructions are specified for manual application of Jotachar JF750 and must be strictly adhered to.

Mixing: See Product mixing section within Single leg airless spray application.

Where part kits of Jotachar JF750 are required for small areas components "A" and "B" should be accurately weighed according to the correct mixing ratio and thoroughly mixed. Clean and dry containers should be used. Care should be taken not to mix more material that can be applied within the pot life of Jotachar JF750.
As the mix ratio of Jotachar JF750 is 1 : 1 by weight it is very simple to ensure that the correct ratio is obtained. Simply ensure that equal weights of components "A" and "B" are used.

Application: Jotachar JF750 is applied manually using a plastering trowel or similar and then smoothed off using a short nap roller slightly dampened with Jotun Thinner No. 7, Jotun Thinner No. 10 or No. 17. Rolling should be conducted within 30 minutes of initial application.

Surface finish

A number of different surface finishes are achievable with Jotachar JF750, such as a smooth roller finish or a sprayed stipple finish.
Before the start of any application, it is recommended that all interested parties agree on the required surface finish. The applicator should apply and finish a sample area acceptable to the client representative. This area should be used as a reference area for the project. The applied film should be closed and uniform in thickness, free from voids and sagging.

For a stipple finish, it is recommended that specified thickness is achieved before spraying a uniform stipple finish.

Film thickness per coat

Typical recommended specification range

Dry film thickness:
2 - 35 mm (dependent upon the fire case and project specific requirements)

Theoretical spreading rate:
1 kg of Jotachar JF750 will cover 1 m² per 1 mm applied (based on plural component spray)

Typical Maximum Thickness per coat can be up to 10 mm.
High film build can be achieved dependent upon steelwork configuration, geometry, ambient conditions, pump type and set up as well as primer used.
Maximum WFT is the thickness at which the system can be applied without sagging or slumping.

A typical applied thickness of 6 mm is recommended as this affords the optimum compromise between film build, finish and thickness control. Higher film build is typically achieved with second applied coat of Jotachar.

Some primers may have a semi gloss finish. The higher gloss level of these primers will mean a reduction in the achievable wet film thickness of the 1st coat of Jotachar. A test area should be applied to determine the achievable wet film thickness of the first application. Reduction of gloss by sanding can improve coating build up.

Achieving the specified dry film thickness for each member of the structure is essential to achieve the required fire rating. Final applied PFP system may involve several coats to achieve specified fire rating. The nominal DFTs mentioned above are per coat. Final applied coating may involve several coats and will be specified as per the required fire rating.

Film thickness measurement

Wet film thickness (WFT) measurement and calculation

Regular checking of wet film thickness during application is required to control the applied thickness, it is recommended to use a pre-cut bridge gauge of 75 mm (3 inch) width made from a putty knife to measure the wet film thickness. This Jotachar product is a solvent free epoxy of 100 % solids; applied wet film thickness will be equal to dry film thicknesses. All members of the application team (sprayer, troweller, rollers) should be using these gauges to ensure the required film thickness is achieved and maintained.

Dry film thickness (DFT) measurement

When the coating has cured the dry film thickness can be checked to ISO 19840, or equivalent standard, or as per project specification. There are two principal methods for measuring the thickness of thick film epoxy PFP:

1. Destructive method
Straight holes (1.5-2 mm diameter) are drilled through the applied film of PFP to the substrate, and then the film thickness is measured using a calibrated depth gauge. The holes should be marked and repaired after the measurement.
This method is not recommended as it is time intensive and causes damage to the PFP and primer.

2. Non-destructive method
An electromagnetic or ultrasound dry film thickness gauge is used to measure the dry film thickness of the applied system. Care must be taken to follow the equipment manufacturer's instructions. Any equipment used should have a valid calibration certificate.
This is the recommended method for assessing dry film thickness of the applied system as it is fast, accurate and does not cause any damage.

Example standards include:

• AMPP SSPC-PA2 (2022) Procedure for Determining Conformance to Dry Coating Thickness Requirements – Appendix 11 Method for Measuring the Thickness of Intumescent (Fireproofing) and Cryogenic Spill Protection Coatings Applied to Load-Bearing Structural Steel Members, Fire Divisions, Pipework, and Vessels/Tanks
• ISO 19840:2012 Measurement of, and acceptance criteria for, the thickness of dry films on rough surfaces

Or any relevant local or regional standard applicable to the project.

The dry film thickness (DFT) acceptance criteria (min / average / max) should be defined within the chosen standard for the project and is agreed by all parties in advance of project start-up.

Example:

AMPP SSPC-PA2 (2022), Appendix 11, Table A11.1 whereby the specifier may select the fireproofing thickness restriction level for a given project. Level 3 is satisfactory by Jotun.

In all cases, the average dry film thickness (DFT) applied to each steel section shall be greater than or equal to the specified dry film thickness. If required, the maximum average measured dry film thickness should not exceed 10% above the manufacturer's absolute maximum certified thickness for the relevant section type.

Ventilation

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

Pre-commissioning considerations

Off-site application

Drying and Curing time

Substrate temperature	5 °C	15 °C	23 °C	40 °C
Surface (touch) dry	6 h	3 h	1 h	1 h
Walk-on-dry	24 h	12 h	6 h	3 h
Dry to over coat, minimum	6 h	3 h	2 h	1 h
Dried/cured for service	24 h	12 h	6 h	3 h

Dry to overcoat minimum is with self. See additional guidance for Topcoating.

Drying and curing times are determined under controlled temperatures and relative humidity below 85 %, and at average of the DFT range for the product.

Topcoating
The system should be dry to handle and coating thickness gauge should not leave an indentation on the coating. Prior to application of topcoat, the applicator must ensure that the specified dry film thickness has been achieved.

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.

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	5 °C	15 °C	23 °C	40 °C
Itself	extended	extended	extended	extended
epoxy	14 d	14 d	14 d	14 d
epoxy mastic	14 d	14 d	14 d	14 d
polysiloxane	14 d	14 d	14 d	14 d
polyurethane	14 d	14 d	14 d	14 d
Jotatherm TB550	3 d	3 d	3 d	2 d

Refer to your Jotun representative for a detailed fire protection specification including approved primer and topcoat systems.

Any topcoat used should be approved by Jotun Technical Sales Support. While the generic type of the topcoat may fit the description in the over coating table, the specific topcoat should still be tested for adhesion.

The maximum over coating times depend on the environmental exposure conditions, type of topcoat, and other factors. The topcoat manufacturer should be consulted.

Jotachar JF750 has tested ability to withstand severe weather and environmental exposure to stringent industry standards, without a topcoat. The product is only available in a grey colour, therefore generally a topcoat is used to meet owners' colour scheme.

Specific areas where top-coating of Jotachar JF750 is recommended:

- For aesthetic requirements and high UV exposure. (A general characteristic of all epoxy coatings is chalking with prolonged periods of high UV and moisture exposure)
- Areas of high and continuous moisture exposure, such as the upper surfaces of horizontal decks and flanges.
- For splash zone areas, topcoat system to comprise of Jotun Norsok System No. 7A, 2x300 µm epoxy or similar.

Note: Norsok M-501 sensitive projects may require the application of an epoxy tie-coat on top of the epoxy based fire protection prior to the application of topcoat (Norsok System No. 5A).

Extended – Where an extended overcoating time is stated, the product can be overcoated after an indefinite time period, however the anticipated level of intercoat adhesion can only be achieved through good painting practices. The overcoating time depends on environmental exposure conditions, type of topcoat, and other factors. If the surface has signs of chalking or contamination, surface treatment, such as methodical abrading followed by freshwater washing should be employed. Alkaline detergent should be used to remove heavy contamination.

Exceeded maximum over coating interval of primers

For maximum over coating intervals of approved Jotun primers when used with Jotachar, refer to the approved primer's Application Guide (AG).

Always observe the maximum over coating intervals. Any primer surface which has surface chalking or has exceeded its maximum over coating interval will need to be treated by appropriate abrasion method, e.g. Sweep-blasting, to ensure good intercoat adhesion. It is recommended that a site adhesion test patch, together with a coating survey, is done after secondary surface preparation of the primer.

Corroded and damaged areas should be blast cleaned back to Sa 2½ (ISO 8501-1) and primer re-applied.

Where the above is not possible, surface treatment such as mechanical grinding/disking or very thorough sand papering should be employed. Use suitable sand paper grade of P100 and P120. Polishing of surface must be avoided and frequent changes of the abrasive papers to be made for a matt surface. Followed by thorough fresh water washing to remove all dust. Surface to be thoroughly dried out prior to the application Jotachar JF750.

Zinc epoxy primers which have been exposed to high humidity or outdoor weathering, may have zinc salts (white rust) formation on the surface which is detrimental to adhesion. Zinc salts must be removed prior to application of Jotachar JF750. Careful sanding and/or high pressure water-washing at a minimum of 170 bar (2500 psi) to remove zinc salts. An epoxy tie coat may be applied over the epoxy zinc primer to prevent salts forming.

Depending on primer type, conditions and site practicalities, surface treatment and application of an approved epoxy tie coat may be recommended before application of Jotachar.

Other conditions that can affect drying / curing / over coating

Adding anti-skid to the coating system

Where non-slip properties are required, Jotun anti-skid can be broadcast into an epoxy coat applied on to Jotachar. The epoxy coat should be applied followed by aggregate broadcasted onto the wet film, then sealed off with another pass of the spray gun. The anti-skid deck system can be topcoated with a cosmetic finish.

Jotun Anti-skid, medium particle size (400-600 µm). The recommended usage is 2.5 - 3.3 kg per 10 litres of paint.
Jotun Anti-skid, course particle size (700-1000 µm). The recommended usage is 3.0 - 4.0 kg per 10 litres of paint.

Jota Armour can be applied as an anti-skid system up to 2000 µm on Jotachar JF750.

Site conditions and practicalities

It is recommended that Jotachar is overcoated when sufficiently cured and before the surface is subjected to surface contamination. The use of an epoxy tie-coat may have to be considered before application of topcoat when assessing site practicalities and application practice.

A stippled finish may result with increased settlement of airborne contamination and a heavy stippled finish may result in higher topcoat consumption.

It is good general practice for a 16-hour cure period for all epoxy primers which have been applied at temperatures >10 °C.

Amine bloom / Sweating

Amine bloom is also referred to as amine blushing or sweating, which is an undesired chemical reaction with water on the coating surface that can lead to insufficient adhesion of the subsequent coat. Contributing factors can be lower than minimum temperature during curing, high content of carbon dioxide in the air, high relative humidity and condensation. Amine blooming is a sticky deposit on the surface and may appear as discoloration and/or change of gloss.

If amine bloom is suspected, wash with warm alkaline detergent and/or high pressure fresh water washing to remove all contaminants. Light abrasion of the surface and removal of dust before overcoating will further secure good intercoat adhesion.

Excessive rolling with solvent, in extreme cases, may cause amine bloom on the surface of Jotachar. This is not acceptable for subsequent coat adhesion.

Refer to TSS-TI-133 for more background information.

Water/Moisture contamination

When uncured material is subjected to rain or excessive condensation, white powdery streaks might occur. This must be removed before application of next coat. Thorough survey of the coating surface should be conducted as amine bloom may have formed.

In case of water contamination of an uncured product, the following action should be taken;
- Allow the material to cure
- Dry and wipe the surface with Jotun Thinner No. 7, No. 10 or No. 17.
- High pressure fresh water washing may also be done
- Remove and replace any uncured material

Removal

Overspray and unwanted coated surfaces with Jotachar should be removed with a scraper whilst wet. Substrate should immediately be cleaned by Jotun Thinner No. 7, Jotun Thinner No. 10 or Jotun Thinner No. 17, removing all residue.

Once applied and cured this product can be removed if required.
• A disc grinder should be used to cut through the coating to the substrate
• The material can then be removed with a pneumatic chisel, or manually using a hammer and chisel. Care should be taken not to damage the steel substrate
• Edges of Jotachar repair area to be at an angle of approx. 45° to 90°
• Other means of removal may also be considered, please consult Jotun Technical Sales Support

Repair of coating system

Repair of damaged areas requires complete removal of those areas and restoration of the complete system 'as new'. This includes surface preparation and primer installation.

The following repair procedure is recommended:

• The adjacent border area should be checked to confirm integrity of material and adhesion.
• Mark out the area to be repaired. Masking should be done to protect the surrounding area in a square or rectangular shape.
• Any defective material should be removed using appropriate tools.
• Squaring the repair area is recommended.
• Cut the edges of the repair area at an angle of approx. 45° to 90°. Refer to technical drawing FES GEN Repair Procedure of Jotachar.
• The surrounding area of up to 50-75 mm should be roughened using a grinding disc to ensure sound adhesion of the new coat of Jotachar JF750. After roughening use Jotun Thinner No. 7, Jotun Thinner No. 10 or Jotun Thinner No. 17 to ensure the area is clean.
• Restore the cleanliness, degree of surface preparation and surface roughness of the substrate as per the original specification requirement.
• Apply Jotachar JF750 to the repair area applied to the same coating thickness as existing. Ensure the dry film thickness on the repair area meets the specification and the fire protection requirement.
• Ensure a 50 mm overlap to the surrounding area to ensure a suitable weather seal.

Repair of small areas:

• Areas less than 10 cm² may be prepared by power tool cleaning as prescribed in SSPC SP11 with 50 µm surface profile. On the clean dry surface apply Jotachar JF750 to specified dft.
• Areas larger than 10 cm² but less than 1 m² may be prepared by power tool cleaning as prescribed in SSPC SP11 with 50 µm surface profile. The affected area should be primed using the approved repair primer followed by Jotachar JF750 to the specified dft.
• Areas greater than 1 m² may be prepared by blast cleaning the affected area to Sa 2½ (ISO 8501-1) using abrasive media suitable to achieve a sharp and angular surface profile. The recommended surface profile is 50-75 µm, grade Fine to Medium G; Ry 5 (ISO 8503-1). Power tools should not be used as a primary surface preparation method for large areas.
• Apply the original specified primer to the specified dft.
• Apply Jotachar JF750 at the specified thickness as per the Jotachar JF750 Application Guide to the repair area including the feathered edges.
• Manual application is acceptable at the repair areas providing that a smooth finish is achieved by rolling the surface.
• Apply the specified topcoat at the recommended thickness as per the product application instructions.

Repair of other materials:

Repair of cementitious PFP, please consult with Jotun Technical Sales Support, due the friable nature of the old/ damaged cementitious material.

For patching repairs of other epoxy PFP materials or concrete PFP, repair procedure is as follows:

• The adjacent border area should be checked to confirm integrity of material and adhesion.
• Mark out the area to be repaired. Masking should be done to protect the surrounding area in a square or rectangular shape.
• Any defective material should be removed using appropriate tools.
• Squaring the repair area is recommended.
• Cut the edges of the repair area at an angle of 90°. A right-angled interface is required to allow for the difference of char expansion rates between manufacturers' epoxy PFP materials.
• For repair of existing epoxy PFP material, the surrounding area of up to 50-75 mm should be roughened using

a grinding disc to ensure sound adhesion of the new coat of Jotachar JF750. After roughening use Jotun Thinner No. 7, Jotun Thinner No. 10 or Jotun Thinner No. 17 to ensure the area is clean. Refer to technical drawing FES GEN Repair Procedure to other Epoxy PFP material.
• For repair of concrete PFP, refer to technical drawing FES GEN Repair Procedure to Concrete.
• Areas less than 10 cm² may be prepared by power tool cleaning as prescribed in SSPC SP11 with 50 µm surface profile. On the clean dry surface apply Jotachar JF750 to specified dft.
• Areas larger than 10 cm² but less than 1 m² may be prepared by power tool cleaning as prescribed in SSPC SP11 with 50 µm surface profile. The affected area should be primed using the approved repair primer followed by Jotachar JF750 to the specified dft.
• Areas greater than 1 m² may be prepared by blast cleaning the affected area to Sa 2½ (ISO 8501-1) using abrasive media suitable to achieve a sharp and angular surface profile. The recommended surface profile is 50-75 µm, grade Fine to Medium G; Ry 5 (ISO 8503-1). Power tools should not be used as a primary surface preparation method for large areas.
• Apply the approved primer to the specified dft.
• Apply Jotachar JF750 at the specified thickness as per the Jotachar JF750 Application Guide to the repair area including the feathered edges.
• Manual application is acceptable at the repair areas providing that a smooth finish is achieved by rolling the surface.
• Apply the specified topcoat at the recommended thickness as per the product application instructions.

Weld cutback

The product should be removed prior to welding. The extent of the cutback varies depending on the nature of welding operation.

For small weld operations, e.g. welding of clips or similar fixation, initially remove 100-150 mm in all directions from welding area, on both sides of the steel. After completion of welding, if any blistering or discoloration of the product has occurred, the cutback should be extended 50 mm beyond these defects.

For larger weld operations, e.g. welding of a pipe support or similar structure, initially cutback 200-250 mm in all directions from welding area, on both sides of the steel. After completion of welding, if any blistering or discoloration of the product has occurred, the cutback should be extended 75 mm beyond these defects.

In the case of welding of pre-coated structure members, a welding cutback allowance is recommended to avoid removing and damaging the applied product, initially a cutback of 300-350 mm either side of the weld is required for welding processes which do not require preheat.
For welding processes which require preheat, the cutback allowance depends on the preheat temperature and duration.

Lifting and Transportation
Refer to TSS-TI-119 for Jotachar lifting and transportation guidance. Contact your local Jotun office for further information.

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

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.

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 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^2/l = square metres per litre
mg/m^2 = 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
ASFP = Association for Specialist Fire Protection

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.

This Application Guide supersedes those previously issued.

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.
For your nearest local Jotun office, please visit our website at www.jotun.com.