Surface Preparation and Painting Procedure

REV.	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED
04	08-04-2024	Issued for Approval	SK	KP	JJ
02	11-12-2023	Issued for Approval	SK	KP	JJ
01	14-09-2023	Issued for Approval	SK	KP	JJ

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1. References

Reference is made to the following documents.

- Offer 17735-COM
- Specification N278-000-PI-JSD-2300-005 Specification for Painting[1]

2. General

Our paint system is based on brush/roller application. Painting will be done by Airpack painting specialists. As offered, Airpack equipment will be painted according to the paint schedule below.

- Galvanized steel grating does not require painting.
- Zinc plated and stainless steel bolts do not require painting.
- Stainless steel equipment like tubing, connectors etc. does not require painting.
- Instrumentation paint will be according manufacture standard.

3. Surface preparation

- All structures and equipment are designed and built-in accordance with ISO standards for high durability of the paint systems.
- All oil or grease shall be removed by washing the item to be painted with appropriate solvents or any other suitable means before beginning blast cleaning operations. This includes bolt holes in piping assemblies.
- Weld spatter and remains of temporary welds, deposits or surface defects shall be eliminated appropriately.
- Airpack shall protect all equipment that is not to be painted or liable to be affected by the presence of abrasives or paint. Special attention will be paid to avoid splashes of zinc paint on equipment made of austenitic steels.
- Surface preparation shall be inspected by Airpack Quality Control prior to application of paint.
- Airpack will not perform any mechanical changes to flanges and flange bolt holes and use the delivered flanges.

4. Blast cleaning of carbon steel

All surfaces to be coated, will be blast-cleaned according to:

- The grade of cleanliness, SA 2.5
- The surface profile, to be evaluated using ISO 8503-2
- As painting is Airpack standard, no blast clean record is available.

After blast-cleaning, all dust must be removed using a vacuum cleaner before applying the paint. All blast-cleaned surfaces shall be coated before the deterioration of the "grade of cleanliness". In any case, any surface that has been blast-cleaned shall be coated on the same day.

[1] Airpack paint procedure is followed with color codes from mentioned specification.

5. Paint Application

Coating system will be from paint manufacturer Jotun and interbond.
The products shall be delivered in their original sealed packaging and stored in such conditions as to avoid their degradation. The packaging shall be clearly marked with the product description, the batch number, the fabrication date and the expiration date. Paint shall always be applied to surfaces that are dry, clean and degreased, for both coating on substrate and previous coat.

Painting work shall not proceed if:

- Temperature of the substrate is less than 3°C above the dew point;
- The relative humidity is more than 85% RH (90% RH for inorganic zinc silicates);
- The weather is rainy or foggy, except under shelter, and subject to verification of the atmospheric conditions;
- The minimum or maximum temperature of the ambient atmosphere and the substrate are outside the limits given in the product data sheets.

Application shall be by brush/roller. Stripe coats shall be applied by brush to all angles, corners, and all the welds with the same product than this to be applied on the surface to be painted. Different colours shall be used for all successive coats of the paint system. The finishing coat of the required colour shall be opaque to cover the shade of the undercoat. The thickness of each coat, including frequency shall be checked by Airpack. The values will be recorded and made available.

6. Painting report

A paint report as attached (see attachment 1) will be provided with a final coating check during FAT. Dry film thickness will be checked using a calibrated Quanix Automation 1311669. Calibration certificate will be made available during FAT.

7. Paint systems

For a detailed overview of each item please refer to below paint schedule.

8. Repair procedure

In case a deviation or non-conformity has been found, this will be repaired as per below procedure. Where the coating has been scratched off, flaked, or in any other way damaged as to hamper its protective function, the coating will be grinded off 5 cm around the defect and paint will be re-applied to conform with the painting system defined in this painting procedure.
In case more than 5% of the equipment surface is not conform specifications, the entire part will be blasted and re-coated. Where blasting is not feasible, paint will be grinded off until the bare metal, after which it is re-coated.

PAINT SCHEDULE					
	MATERIAL	DESCRIPTION	SYSTEM	TDFT [µm]	FINAL COLOR
C1	Carbon Steel	STRUCTURAL STEEL	1	320	RAL-9006
C2	Stainless Steel	PIPING COLD	1	320	RAL-9006
C3	Stainless Steel	PIPING HOT	3	150	Metallic Gray
C4	Carbon Steel	PIPING WATER	1	320	RAL-9006
C5	Stainless Steel	Y-STRAINER	1	320	RAL-9006
C6	Stainless Steel	CHECK VALVE	1	320	RAL-9006
C7	Stainless Steel	VALVES IN MAIN PROCESS LINE	1	320	RAL-9006
C8	Carbon Steel	VALVES IN WATER PROCESS LINE	1	320	RAL-9006
C9	Carbon Steel	PRESSURE CONTROL VALVE	1	320	RAL-9006
C10	Carbon Steel	PRESSURE SAFETY VALVE COLD	1	320	RAL-9006
C11	Carbon Steel	PRESSURE SAFETY VALVE HOT	3	150	Metallic Gray
C12	Carbon Steel	PULSATION DAMPENER COLD	1	320	RAL-9006
C13	Carbon Steel	PULSATION DAMPENER HOT	3	150	Metallic Gray
C14	Carbon Steel	COMPRESOR HOT PARTS	3	150	Metallic Gray
C15	Carbon Steel	COMPRESSOR COLD PARTS	1	320	RAL-6010
C16	Carbon Steel	INTER/AFTER COOLER SHELL	1	320	RAL-9006
C17	Aluminium	MAIN E-MOTOR	Mfr. std.	Mfr. std.	RAL-7030
C18	Aluminium	AUXILLIARY MOTOR	Mfr. std.	Mfr. std.	RAL-7030
C19	Carbon Steel	LOCAL PUSHBUTTON STATION	Mfr. std.	Mfr. std.	RAL-7035
C20	Carbon Steel	LOCAL JUNCTIONBOX	Mfr. std.	Mfr. std.	RAL-7035
C21	Stainless Steel	GENERAL	Not painted	-	-

** Possibilities for painting of materials with ATEX certification is limited*

Paint system 1 (acc. ISO 12944-2 C5M-H table S7.04, & Jotun)

- Structural steel & piping
- Surface preparation Sa 2½
- Temperatures up to 120°C

Layer	Type of paint	Make	DFT
1	epoxy mastic	Jotamastic Smart Pack	90 µm
2	epoxy mastic	Jotamastic Smart Pack	90 µm
3	epoxy mastic	Jotamastic Smart Pack	90 µm
4	Polyurethane	Hardtop XP	50 µm
		Total DFT	**320** µm

Paint system 3

- High temperature / Carbon steel cycling use
- Surface preparation Sa 2½
- Temperatures -196 up to 650°C
- Available colours: Metallic Gray (matte)

Layer	Type of paint	Make	DFT
1	Multipolymeric Matrix coating	International Interbond 12024UCP	75 µm
2	Multipolymeric Matrix coating	International Interbond 12024UCP	75 µm
		Total DFT	**150** µm

PAINT REPORT

Customer : Lavan Industry Development Company (LIDCO)
Purchase order number : LIDCO-PO-NEC-278-6019
Equipment : High Pressure Air Compressor
Equipment item no. : K-020
Airpack ref. no. : 17735-COM
Serial no. : T-2023-00799
Test location : Zierikzee
Test date : ……

Item : SKID
Paint system : 1

MEASUREMENTS According to Attachment #1

Attachment #1

Paint measurements of skid

Paint system

Batch Number

Projectnumber 17735-COM

Start date

Material Temp. °C

1st layer

2nd layer

3rd layer

4th layer

5th layer

Specification layer Thickness minimum of 320 µ

Finish date

Measurements in µ

		Layer		measure point 1	measure point 2	measure point 3	measure point 4	measure point 5	measure point 6	measure point 7	measure point 8	measure point 9	measure point 10	measure point 11	measure point 12	measure point 13	measure point 14	measure point 15	Min Max
Date		1	Min																
Temperature	°C																		
Humidity	%		Max																
Date		2	Min																
Temperature	°C																		
Humidity	%		Max																
Date		3	Min																
Temperature	°C																		
Humidity	%		Max																
Date		4	Min																
Temperature	°C																		
Humidity	%		Max																
Date		5	Min																
Temperature	°C																		
Humidity	%		Max																

Measurements in µ during FAT

		Layer		measure point 1	measure point 2	measure point 3	measure point 4	measure point 5	measure point 6	measure point 7	measure point 8	measure point 9	measure point 10	measure point 11	measure point 12	measure point 13	measure point 14	measure point 15	Min Max
Date		all	Min																
Temperature	°C																		
Humidity	%		Max																

Interbond® 1202UPC

Universal Pipe Coating

PRODUCT DESCRIPTION

A high temperature universal pipe coating (UPC) that complies with the performance criteria of ISO12944-9 standard for corrosion protection in offshore environments.

Interbond 1202UPC is a two component, ambient cure, inorganic copolymer.

Conforms to the inert multi-polymeric matrix coating definition as per NACE SP0198 standard.

INTENDED USES

Suitable for protecting above-ground piping and accessories operating at temperatures between -196ºC (-321ºF) to +650ºC (1202ºF).

Interbond 1202UPC reduces paint complexity and overall painting costs of new construction projects by simplifying coating specifications for process piping and accessories.

Designed as a two coat or single coat application to carbon or stainless steel for long term corrosion protection.

Suitable for use on surfaces either uninsulated or under thermal insulation and for the protection of cryogenic piping and equipment. Not suitable for buried service.

PRACTICAL INFORMATION FOR INTERBOND 1202UPC

Colour	Metallic Grey
Gloss Level	Matt
Volume Solids	56%
Typical Thickness	100-200 microns (4-8 mils) dry equivalent to 179-357 microns (7.2-14.3 mils) wet
Theoretical Coverage	5.60 m²/litre at 100 microns d.f.t and stated volume solids 225 sq.ft/US gallon at 4 mils d.f.t and stated volume solids
Practical Coverage	Allow appropriate loss factors
Method of Application	Airless Spray, Air Spray, Brush, Conventional Spray, Roller

Drying Time

			Overcoating interval with self	
Temperature	**Touch Dry**	**Hard Dry**	*Minimum*	*Maximum*
10°C (50°F)	90 minutes	6 hours	6 hours	14 days
15°C (59°F)	60 minutes	6 hours	6 hours	14 days
25°C (77°F)	30 minutes	3 hours	6 hours	14 days
40°C (104°F)	15 minutes	3 hours	6 hours	14 days

Where maximum overcoating intervals are exceeded, clean the surface of Interbond 1202UPC thoroughly with clean fresh water then lightly abrade.

REGULATORY DATA

Flash Point (Typical)	Part A 37°C (99°F); Part B 76°C (169°F); Mixed 39°C (102°F)	
Product Weight	1.25 kg/l (10.4 lb/gal)	
VOC	3.42 lb/gal (410 g/lt)	EPA Method 24
	311 g/kg	EU Solvent Emissions Directive (Council Directive 2010/75/EU)
	405 g/lt	Chinese National Standard GB23985

See Product Characteristics section for further details

Universal Pipe Coating

SURFACE PREPARATION

All surfaces to be coated should be clean, dry and free from contamination. Prior to paint application all surfaces should be assessed and treated in accordance with ISO 8504:2000. Oil or grease should be removed in accordance with SSPC-SP1 solvent cleaning.

Abrasive Blast Cleaning
Abrasive blast clean to Sa2½ (ISO 8501-1:2007) or SSPC-SP10. If oxidation has occurred between blasting and application of Interbond 1202UPC, the surface should be reblasted to the specified visual standard. Surface defects revealed by the blast cleaning process should be ground, filled, or treated in the appropriate manner.

Power Tool Cleaning (Small Areas Only)
For small areas of touch up and repair, Power Tool cleaning to SSPC SP11 is suitable . Optimum performance will be achieved with a minimum surface profile of 50 microns (2 mils).

Austenitic Stainless Steel
Ensure surface is clean, dry and free from metal corrosion products prior to application. Abrasive blast with nonmetallic and chloride free abrasive (e.g. aluminium oxide or garnet) to obtain anchor profile of 37.5 to 50 microns (1.5 to 2 mils).

Optimum performance will be achieved for steel operating under high and cyclic temperature conditions when the preferred 50 microns (2 mils) profile is obtained.

Primed Surfaces
Interbond 1202UPC is suitable for application to unweathered steelwork freshly coated with zinc silicate shop primers.

If the zinc shop primer shows extensive or widely scattered breakdown, or excessive zinc corrosion products, overall sweep blasting will be necessary. Other types of shop primer are not suitable for overcoating and will require complete removal by abrasive blast cleaning.

Weld seams and damaged areas should be blast cleaned to Sa2½ (ISO 8501-1:2007) or SSPC-SP6.

APPLICATION

Mixing

Material is supplied in two containers as a unit. Always mix a complete unit in the proportions supplied. Once the unit has been mixed it must be used within the working pot life specified.

(1) Agitate Base (Part A) with a power agitator.
(2) Combine entire contents of Curing Agent (Part B) with Base (Part A) and mix thoroughly with power agitator.

Refer to Interbond 1202UPC Application Guidelines for more details.

Mix Ratio

28 part(s) : 1 part(s) by volume

Working Pot Life

10°C (50°F)	15°C (59°F)	25°C (77°F)	40°C (104°F)
8 hours	8 hours	8 hours	4 hours

Airless Spray	Recommended	Tip Range 0.58-0.69 mm (23-27 thou) Total output fluid pressure at spray tip not less than 141 kg/cm² (2005 p.s.i.) To ensure easy application, all filters should be removed from the pump and gun.
Air Spray (Pressure Pot)	Recommended when topcoating	Gun: DeVilbiss MBC or JGA Air Cap: 704 or 765 Fluid Tip: E
Air Spray (Conventional)	Recommended when topcoating	Use suitable proprietary equipment
Brush	Suitable - touch up only	Typically 60 microns (2.4 mils) can be achieved
Roller	Suitable - touch up only	Typically 60 microns (2.4 mils) can be achieved
Thinner	International GTA007	Thinning is not normally required. Consult the local representative for advice during application in extreme conditions. Do not thin more than allowed by local environmental legislation.
Cleaner	International GTA007	Choice of cleaner maybe subject to local legislation. Please consult your local representative for specific advice.

Work Stoppages

Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush all equipment with International GTA007. Once units of material have been mixed they should not be resealed and it is advised that after prolonged stoppages work recommences with freshly mixed units.

Clean Up

Clean all equipment immediately after use with International GTA007. It is good working practice to periodically flush out spray equipment during the course of the working day. Frequency of cleaning will depend upon amount sprayed, temperature and elapsed time, including any delays.

All surplus materials and empty containers should be disposed of in accordance with appropriate regional regulations/legislation.

Interbond® 1202UPC

Universal Pipe Coating

PRODUCT CHARACTERISTICS

The detailed Interbond 1202UPC Application Guidelines should be consulted prior to use.

Interbond 1202UPC conforms to the Inert Multipolymeric Matrix coating definition as per NACE Standard Practice SP0198 Table 2 typical recommendations for use on carbon steel equipment under thermal insulation.

When applying Interbond 1202UPC in confined spaces ensure adequate ventilation.

Surface temperature must always be a minimum of 3°C (5°F) above dew point.

Interbond 1202UPC reacts with atmospheric moisture, and as such when in the can should remain covered at all times. If the tin is left open and not agitated for 30-60 minutes, a skin may form. This should be removed prior to re-mixing and continued application.

In common with many products containing leafing aluminium pigmentation Interbond 1202UPC may be prone to developing a “polished” appearance in areas of minor mechanical impact etc. However, this phenomenon is merely aesthetic and is not detrimental to the anti-corrosive performance of the product.

As with all coated surfaces, it is recommended that appropriate care be taken during storage and transport to avoid mechanical damage from dragging and scraping.

Due to the flexible nature of the coating and total recommended dry film thickness being at a minimum of 200 microns (8 mils), pull-off adhesion testing (as per ISO 4624) is not considered relevant. Adhesion should be evaluated using cross cut methods as specified in ASTM D3359. Acceptable rating achieved in practice is ≥3A.

When using in high heat service over inorganic zinc primer, the products should be applied in strict accordance with film thickness specifications, since application of excessive thicknesses may cause blistering or adhesion loss. Determine that the inorganic zinc primer is thoroughly cured prior to application of the high heat coating by following the curing instructions given on the relevant product data sheet.

When using a zinc silicate primer, the recommended thickness of zinc silicate is 50 microns (2 mils) dry film thickness to ensure maximum surface strength for any subsequent temperature cycling and to avoid flaking of topcoats. The maximum subsequent single coat thickness of Interbond 1202UPC should be 150 microns (6 mils), with a maximum total system dry film thickness of 300 microns (12 mils). It is preferable to overcoat zinc silicate before weathering but in cases where this is not possible then the zinc silicate surface should be clean and free of zinc corrosion products.

Note: VOC values are typical and are provided for guidance purpose only. These may be subject to variation depending on factors such as differences in colour and normal manufacturing tolerances.

Low molecular weight reactive additives, which will form part of the film during normal ambient cure conditions, will also affect VOC values determined using EPA Method 24.

SYSTEMS COMPATIBILITY

Interbond 1202UPC is normally applied direct to metal. This specialist coating is only compatible with a very limited number of products.

Suitable primers are:

Interzinc 22 Series

Overcoating of Interbond 1202UPC for colour identification purposes may be possible.

Suitable topcoats are:

Interthane 990
Intertherm 875

For other suitable topcoats, consult International Protective Coatings.

ADDITIONAL INFORMATION

Further information regarding industry standards, terms and abbreviations used in this data sheet can be found in the following documents available at www.international-pc.com:

- Definitions & Abbreviations
- Surface Preparation
- Paint Application
- Theoretical & Practical Coverage
- Interbond 1202UPC Application Guidelines

Individual copies of these information sections are available upon request.

SAFETY PRECAUTIONS

This product is intended for use only by professional applicators in industrial situations in accordance with the advice given on this sheet, the Safety Data Sheet and the container(s), and should not be used without reference to the Safety Data Sheet (SDS).

All work involving the application and use of this product should be performed in compliance with all relevant national, Health, Safety & Environmental standards and regulations.

In the event welding or flame cutting is performed on metal coated with this product, dust and fumes will be emitted which will require the use of appropriate personal protective equipment and adequate local exhaust ventilation.

If in doubt regarding the suitability of use of this product, consult AkzoNobel for further advice.

PACK SIZE

Unit Size	Part A		Part B	
	Vol	Pack	Vol	Pack
15 litre	14.48 litre	20 litre	0.52 litre	0.75 litre
5 US gal	3.82 US gal	5 US gal	0.18 US gal	0.25 US gal
1 US gal	0.77 US gal	1 US gal	0.03 US gal	1 US pint

For availability of other pack sizes, contact AkzoNobel.

SHIPPING WEIGHT (TYPICAL)

Unit Size	Part A	Part B
15 litre	19.6 kg	0.61 kg
5 US gal	43.9 lb	1.7 lb
1 US gal	8.7 lb	0.4 lb

STORAGE

Shelf Life	12 months minimum at 25°C (77°F). Subject to re-inspection thereafter. Store in dry, shaded conditions away from sources of heat and ignition.

Important Note

www.international-pc.com

Technical Data
Hardtop XP

Jotun Protects Property

Product description
A two-pack high solid, aliphatic polyurethane topcoat with excellent gloss and colour retention. Hardtop XP bases are intermediates and need to be processed before use.

Recommended use
As a glossy topcoat over most epoxy systems where a durable, weather-resistant finish is required in a wide range of aggressive atmospheres.

Film thickness and spreading rate

	Minimum	Maximum	Typical
Film thickness, dry (µm)	40	100	60
Film thickness, wet (µm)	65	160	95
Theoretical spreading rate (m^2/l)	15,8	6,3	10,5

Physical properties

Colour	According to colour card and Multicolor tinting system (MCI)
Solids (vol %)*	63 ± 2
Flash point	30ºC ± 2 (Setaflash)
VOC	2,8 lbs/gal (336 gms/ltr) USA-EPA Method 24 320 gms/ltr UK-PG6/23(97). Appendix 3
Gloss	Glossy
Gloss retention	Excellent
Water resistance	Very good
Abrasion resistance	Very good
Solvent resistance	Good
Chemical resistance	Good
Flexibility	Very good

*Measured according to ISO 3233:1998 (E)

Hong Kong rules:
Category of paints - Other vessel coatings; VOC 336 gms/ltr HK EPD method (Ready to use); Exempt compound - N/A; Specific gravity: 1.22 (A+B); Both VOC and Specific gravity values rovided are typical values, subject to changes when different colour involved.

Surface preparation

All surfaces should be clean, dry and free from contamination. The surface should be assessed and treated in accordance with ISO 8504.

Coated surfaces
Clean, dry and undamaged compatible primer. Please contact your local Jotun office for more information.

Other surfaces
The coating may be used on other substrates. Please contact your local Jotun office for more information.

Condition during application

The temperature of the substrate should be minimum 5°C and at least 3°C above the dew point of the air, temperature and relative humidity measured in the vicinity of the substrate. Good ventilation is required in confined areas to ensure correct drying.

Application methods

Spray	Use airless spray or conventional spray
Brush	Recommended for stripe coating and small areas, care must be taken to achieve the specified dry film thickness.
Roller	May be used. However when using roller application care must be taken to apply sufficient material in order to achieve the specified dry film thickness.

Application data

Mixing ratio (volume)	10:1
Mixing	10 parts Hardtop XP Comp. A (Base) to be mixed thoroughly with 1 part Hardtop XP, Comp. B (Curing agent) by powered mechanical equipment. Mix complete units only, do not part mixing of this product.
Pot life (23°C)	1,5 hours
Thinner/Cleaner	Jotun Thinner No. 10/26
Guiding data airless spray	
Pressure at nozzle	15 MPa (150 kp/cm², 2100 psi)
Nozzle tip	0.28-0.38 mm (0.011-0.017")
Spray angle	40-80º
Filter	Check to ensure that filters are clean.
Note	Jotun Thinner No. 26 is supplied and used in USA due to legislation.

Drying time

Drying times are generally related to air circulation, temperature, film thickness and number of coats, and will be affected correspondingly. The figures given in the table are typical with:

* Good ventilation (Outdoor exposure or free circulation of air)
* Typical film thickness
* One coat on top of inert substrate

Substrate temperature	**5°C**	**10°C**	**23°C**	**40°C**
Surface dry	16 h	6 h	3,5 h	2 h
Through dry	24 h	14 h	7 h	4 h
Cured	21 d	14 d	7 d	3 d
Dry to recoat, minimum [1]	24 h	14 h	7 h	4 h

1. The surface should be dry and free from any contamination or chalking prior to application of the subsequent coat.
2. Early exposure to condensation (high humidity, low temperature) may cause colour and/or gloss variations.

The given data must be considered as guidelines only. The actual drying time/times before recoating may be shorter or longer, depending on film thickness, ventilation, humidity, underlying paint system, requirement for early handling and mechanical strength etc. A complete system can be described on a system sheet, where all parameters and special conditions could be included.

Typical paint system

Jotacote Universal	1 x 150 µm	(Dry Film Thickness)
Hardtop XP	**1 x 60 µm**	**(Dry Film Thickness)**
Jotamastic 87	1 x 150 µm	(Dry Film Thickness)
Hardtop XP	**1 x 60 µm**	**(Dry Film Thickness)**

Note: To obtain full coverage an extra coat may be necessary, especially for signal colours in red, orange and yellow.
Other systems may be specified, depending on area of use

Storage

The product must be stored in accordance with national regulations. Storage conditions are to keep the containers in a dry, cool, well ventilated space and away from source of heat and ignition. Containers must be kept tightly closed.

Handling

Handle with care. Stir well before use.

Packing size

20 litre unit: 18,2 litres Comp. A in a 20 litre container and 1,8 litres Hardtop XP Comp. B (curing agent) in a 3 litre container or
5 litre unit: 4,55 litres Comp. A in a 5 litre container and 0.45 litre Hardtop XP Comp. B (curing agent) in a 1 litre container

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Health and safety

Please observe the precautionary notices displayed on the container. Use under well ventilated conditions. Do not breathe or inhale 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.

For detailed information on the health and safety hazards and precautions for use of this product, we refer to the Material Safety Data Sheet.

DISCLAIMER

The information in this data sheet is given to the best of our knowledge based on laboratory testing and practical experience. However, as the product can be used under conditions beyond our control, we can only guarantee the quality of the product itself. We also reserve the right to change the given data without notice. Minor product variations may be implemented in order to comply with local requirements.
If there is any inconsistency in the text the English (UK) version will prevail.

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ISSUED 20 MAY 2011 BY JOTUN
THIS DATA SHEET SUPERSEDES THOSE PREVIOUSLY ISSUED

Technical Data
Jotamastic Smart Pack

Product description
Jotamastic Smart Pack is a two-pack surface tolerant high solids epoxy mastic coating which is provided in 1:1 mixing ratio for easy mixing and reduced wastage. Jotamastic Smart Pack is designed to be applied by brush or roller.

Recommended use
Anticorrosive touch-up coating for steel structures where small repairs are required and spray application is not practical. Jotamastic Smart Pack is suitable for areas with lower quality surface preparation and extended durability is expected. It is recommended to use brush for the first coat.

Film thickness and spreading rate

	Minimum	Maximum	Typical
Film thickness, dry (µm)	50	120	80
Film thickness, wet (µm)	68	163	110
Theoretical spreading rate (m^2/l)	14,7	6,1	9,2

Comments
Film thickness above is typical for what is achieved by one coat of brush or roller application.

Physical properties

Colour	Aluminium, Black, Buff, Green, Grey, Red
Solids (vol %)*	72 ± 2 Aluminium 75 ± 2 Black, Buff, Grey, Green, Red
Flash point	33ºC ± 2 (Setaflash)
VOC	**Aluminium** 2,51 lbs/gal (300 gms/ltr) USA-EPA Method 24 240 gms/ltr UK-PG6/23(97). Appendix 3 **Colours** 2,34 lbs/gal (280 gms/ltr) USA-EPA Method 24 230 gms/ltr UK-PG6/23(97). Appendix 3
Gloss	Semigloss
Gloss retention	Fair
Water resistance	Very good
Abrasion resistance	Very good
Solvent resistance	Good
Chemical resistance	Good
Flexibility	Good

*Measured according to ISO 3233:1998 (E)

Hong Kong rules:
Category of paints - Other vessel coatings; VOC 300(AL)/280(color) gms/ltr HK EPD method (Ready to use); Exempt compound - N/A; Specific gravity: 1.37 (A+B); Both VOC and Specific gravity values provided are typical values, subject to changes when different colour involved.

Surface preparation

All surfaces should be clean and free from contamination. The surface should be assessed and treated in accordance with ISO 8504.

Bare steel
Cleanliness: Power tool cleaning to min. St 2, mill scale free (ISO 8501-1:2007). Improved surface treatment (blast cleaning to Sa 2½) will improve the performance. In case of waterjetting the flash rust degree shall not exceed M (moderate) in SSPC and NACE standards for waterjetted surfaces.

Shopprimed steel
Clean, dry and undamaged approved shopprimer.

Coated surfaces
Clean, dry and undamaged compatible primer. Contact your local Jotun office for more information. For maintenance UHPWJ to WJ2 (NACE No.5/SSPC-SP 12) or Power tool cleaning to min. St 2 for rusted areas

Other surfaces
The coating may be used on other substrates. Please contact your local Jotun office for more information.

Condition during application

The temperature of the substrate should be minimum 0°C and minimum 3°C above the dew point of the air. The temperature and the relative humidity should be measured in the vicinity of the substrate. Good ventilation is usually required in confined areas to ensure proper drying. With forced ventilation, avoid heated air at first as this may cause surface drying and solvent entrapment. The coating should not be exposed to oil, chemicals or mechanical stress until fully cured.

Hydrojetting of steel surface makes a wet surface. The surrounding air must have a relative humidity not exceeding 85 %. Before painting the surface shall not be glossy with moisture, but can have a patchy apperance.

Application methods

Spray	Airless spray can be used.
Brush	Use a round brush. Care must be taken to achieve the spreading rate.
Roller	Use of a foam roller will provide the best finish results.

Application data

Mixing ratio (volume)	1:1
Mixing	1 parts by volume Comp. A (Base) to be mixed thoroughly with 1 part by volume Jotamastic Smart Pack, Comp. B (Curing agent). Mix well and allow to stand (10 min. including mixing).
Pot life (23°C)	1½ hours
Thinner/Cleaner	Jotun Thinner No. 17
Note	* The temperature of the mixture of base and curing agent is recommended to be at least 15°C, otherwise extra solvent may be required to obtain correct viscosity. * Too much solvent results in lower sag resistance and slower cure. * If extra solvent is necessary, this should be added after mixing of the two components.

Drying time

Drying times are generally related to air circulation, temperature, film thickness and number of coats, and will be affected correspondingly. The figures given in the table are typical with:

* Good ventilation (Outdoor exposure or free circulation of air)
* Typical film thickness
* One coat on top of inert substrate

Substrate temperature	**0°C**	**5°C**	**10°C**	**23°C**	**40°C**
Surface dry	24 h	12 h	7 h	4 h	2 h
Through dry	45 h	20 h	14 h	7 h	3 h
Cured	21 d	14 d	10 d	7 d	3 d
Dry to recoat, minimum	45 h	20 h	14 h	7 h	3 h
Dry to recoat, maximum [1]					

1. Provided the surface is free from chalking and other contamination prior to application, there is normally no overcoating time limit. Best intercoat adhesion occurs, however, when the subsequent coat is applied before preceding coat has cured. If the coating has been exposed to direct sunlight for some time, special attention must be paid to surface cleaning and mattening/removal of the surface layer in order to obtain good adhesion.

The given data must be considered as guidelines only. The actual drying time/times before recoating may be shorter or longer, depending on film thickness, ventilation, humidity, underlying paint system, requirement for early handling and mechanical strength etc. A complete system can be described on a system sheet, where all parameters and special conditions could be included.

Typical paint system

Jotamastic Smart Pack 3 coats with roller

or
Jotamastic Smart Pack 2-3 coats with brush

Followed by surrounding topcoat.

Other systems may be specified, depending on area of use

Storage

The product must be stored in accordance with national regulations. Storage conditions are to keep the containers in a dry, cool, well ventilated space and away from source of heat and ignition. Containers must be kept tightly closed.

Handling

Handle with care. Stir well before use.

Packing size

10 litre unit: 5 litres Comp. A (base) in a 5 litre container and 5 litres Jotamastic Smart Pack, Comp. B (curing agent) in a 5 litre container

Health and safety

Please observe the precautionary notices displayed on the container. Use under well ventilated conditions. Do not breathe or inhale 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.

For detailed information on the health and safety hazards and precautions for use of this product, we refer to the Material Safety Data Sheet.

ISSUED 19 JANUARY 2012 BY JOTUN
THIS DATA SHEET SUPERSEDES THOSE PREVIOUSLY ISSUED