



**JOTUN**

# Jota Armour

Non-slip coating for steel and concrete



# Exceptional non-slip properties – safe passage for people and equipment

The single most common cause of injury at work is the result of a trip or a slip on smooth, wet, greasy or frosty surfaces. Jota Armour is an innovative non-slip coating specially designed to provide safe passage for people or equipment moving up, down and across steel and concrete areas such as decks, loading ramps and walkways.

Jota Armour combines highly effective anti-slip properties with practical and economic benefits that reduce material usage, lower labour costs and improve efficiency and economy – factors of extreme importance where time restraints are simply not acceptable.

## Rough and tough

Jota Armour combines a high solids, surface tolerant, abrasion resistant anti-corrosive epoxy coating with a selected blend of fused aluminium oxide.

## High coefficient of friction (COF)

The surface profile is rough with deep and sharp asperities creating a high COF that provides exceptional non-slip properties for people and equipment even when applied on a steeply sloping ramp or gangway.

## Penetrates and adheres

Being high solids and surface tolerant, Jota Armour flows into a consistent film and penetrates deep down into the substrate to provide excellent adhesion.

## Surface tolerant

Whilst high surface preparation standards will improve performance, this may not be an option. Jota Armour, however, can be applied to a sound surface down to St 2.

## Excellent performance

Jota Armour is resistant to abrasion, water, solvents and chemicals and is easy to clean.



# Very high coefficient of friction – non-slip whatever the conditions

Jota Armour is designed to provide a non-slip surface whatever the conditions, when wet, oily or frosty, on the flat or at an angle. With its tough anti-corrosive properties, Jota Armour protects the substrate whilst protecting people and equipment in the harshest conditions.

## DEF-STAN 80-134 Flight Deck Approved

Jota Armour has been independently tested to the rigorous standards required for approval under the Defence Standard 80-134 and has been granted 'Flight Deck' approval by the MOD in the United Kingdom for use on Royal Navy vessels.

To be granted DEF-STAN 80-134 approval eight test criteria must be met. Jota Armour was tested under laboratory conditions with complete success.

The details of the tests are shown right:

Property	Requirements	Results
Scratch resistance (Using a load test)	No penetration of the film	✓
Resistance to ester lubricant (Half test panel submerged in lubricant at 70°C)	No blistering, softening, colour change or other defects	✓
Texture depth	Minimum texture depth 0.4–0.6mm	✓
Salt spray resistance	No blistering or other defects	✓
Impact resistance	No cracking, loss of adhesion or other defects	✓
Resistance to artificial weathering	No blistering, cracking or loss of adhesion	✓
Wear test plate (see note below)	Loss of mass to be less than 5g from test plate *	✓
Anti-slip properties	Coefficients of friction: Wet: greater than or equal to 0.7 Oily: greater than or equal to 0.3	✓

\* The wear test consists of a loaded metal plate being drawn back and forth in contact with the test plate at 37 cycles per minute.

The wear blade is of mild steel to BS3900-part A3 2.1 and for the purpose of the test is loaded with a 5000g weight.

## COF (coefficient of friction) explained

### The importance of contact

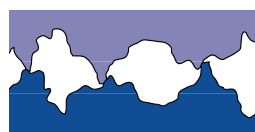
As two rough surfaces move against each other they stick and prevent motion. As the force that is pushing increases, the static friction increases too. Eventually the force will match the maximum static friction and the object will begin to move. After that point kinetic friction will start affecting the object.

### Coefficient of friction (COF) – the key to non-slip surfaces

The coefficient of friction (COF) is the value between the horizontal force (the person or item moving on the surface) when slipping begins



*If the surfaces are smooth the contact points are modest and provide high slippage*



*The sharper the contact points the greater the anti-slip properties*

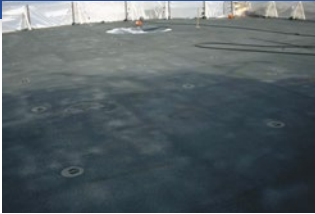
and the vertical force (the surface on which the person or item is moving). For example, a leather soled shoe on a smooth steel surface has a low coefficient of friction but a rubber sole on trowelled concrete has a high one.

### COF – influencing factors

Other factors affect the COF including wear on the surface, exposure to the environment, build up of contaminants and lack of cleaning.

# Jota Armour case histories – a track record of success

## HMS Endurance



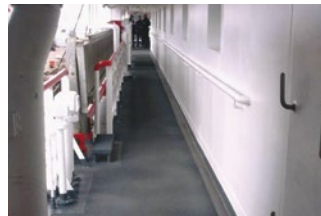
Flight deck –  
First full coat of Jota Armour



Flight deck –  
Second full coat of Jota Armour



Flight deck –  
Completed with white markings



Starboard alleyway –  
Completed with Jota Armour

## M/F Bitten Clausen



Photo: Jesper T Andersen / jtashippphoto.dk



Built in 2001, the ferry Bitten Clausen sails the Als Sound between Ballebro and Hardseshøj in Denmark – less than one kilometre from coast to coast. In early 2007 the ferry carried its 1,000,000th vehicle. Each of these vehicles was driven over Jota Armour protected areas which are still performing well.

## Rig 'Nan Hai 2'



The rig 'Nan Hai 2', owned by CNOOC, during application of Jota Armour. A 200 µm coat of Primastic Universal was applied to the zinc silicate shopprimer (20 µm) followed by an 1800 µm coat of Jota Armour Grey. After touch up a 60 µm coat of Hardtop AS Green was applied.

## Institute of Master Mariners Walkway



Photo © www.danheller.com



A 120 µm coat of Jotamastic 87 followed by a 1000 µm coat of Jota Armour protects the walkway to the Institute of Master Mariners HOS Wellington moored in the River Thames. "After a year of extremely hard wear it is still in excellent condition," said Maintenance Engineer Martin Brownjohn.

# Spray in one coat – fast, simple and easy to apply

## No trowelling – simply spray

Unlike most trowel applied non-slip coatings, Jota Armour is spray applied. This is a far simpler process, no training is necessary – a ship's crew, for example, can paint a deck with Jota Armour whilst the vessel is at sea.

Application is easily done with a gravity feed hopper gun.



## Ready to mix

The three Jota Armour components are delivered in one 20 litre tin ready for you to mix. Simple, no delay, no complicated mixing process.

3 components in one tin



## Apply in just one coat

Most non-slip coatings involve a 3 stage operation to achieve a satisfactory paint system. Jota Armour is high build and can be applied in just one coat. Faster, simpler and more cost effective.

Application time  
**60m<sup>2</sup> / hour**

## Unrivalled benefits

Property	Benefit
One coat system	<i>Reduced application time</i>
Mix 3 components in the can	<i>Quick, easy</i>
Spray application	<i>Simpler, easier than trowel</i>
Self application	<i>Lower maintenance costs</i>
High build	<i>Longer lasting protection</i>
Low solvent content	<i>Reduced H&amp;E impacts</i>

## Choice of colours and topcoats

Jota Armour is available in a limited range of colours, including Grey BS 640, and can be overcoated with a variety of topcoats.



Jota Armour applied

# Jotun Marine Coatings and Jotun Protective Coatings offices worldwide

Legal Jotun entities worldwide are listed. For details of Branch offices and Jotun representation in countries not listed, please visit [jotun.com](http://jotun.com)

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