JDGuard 4431

Product description

This is a two component polyamine cured pure epoxy coating. It is a fast drying, abrasion resistant, high solids, high build product. Designed as a universal, all round, all year, new building coating where fast dry to handle is required. Can be used as primer, mid coat or finish coat in atmospheric and immersed environments. Suitable for properly prepared aluminium, carbon steel, galvanised steel, shop primed steel and stainless steel substrate. It can be applied at sub zero surface temperatures.

Typical use

Marine:

Exterior and interior areas, including water ballast tanks, crude oil tanks, outside hulls, superstructures, decks and cargo holds.

Approvals and certificates

Obtained the certificate of works approval of China Classification Society.

Colours

Aluminium, Aluminium red , grey, red

Product date

Property	Test/Standard	Description
Solids by volume	ISO 3233	75±2%
Gloss level（GU60°）	ISO 2813	matt（0-35）
Flash point	ISO 3679 Method 1	35℃
Density	calculated	1.4Kg/L
VOC-China	GB/T23985-2009(ISO11890-1)	210g/L

The provided data is typical for factory produced products, subject to slight variation depending on colour. All data is valid for mixed paint.

Gloss description: According to Jindun Performance Coatings' definition.

Film thickness per coat

Typical recommended specification range

Dry film thickness	100µm - 250µm
Wet film thickness	133µm - 333µm
Theoretial spreading rate	7.5m^2/L - 3m^2/L

Surface preparation

To secure lasting adhesion to the subsequent product all surfaces shall be clean, dry and free from any contamination.

Surface preparation summary table

Substrate	Surface preparation	
	Minimum	Recommended
Carbon steel	St 2 (ISO 8501-1)	Sa 2½ (ISO 8501-1)
Stainless steel	The surface shall be hand ormachine abraded with non-metallic abrasives or bonded fibre machine or hand abrasive pads to impart a scratch pattern to the surface and toremove all polish from thesurface.	Abrasive blast cleaning to achievea surface profile using approvednon- metallic abrasive media which is suitable to achieve a sharp and angular surface profile.
Aluminium	The surface shall be hand ormachine abraded with non-metallic abrasives or bonded fibre machine or hand abrasive pads to impart a scratch pattern to the surface and toremove all polish from thesurface.	Abrasive blast cleaning to achievea surface profile using approvednon- metallic abrasive media which is suitable to achieve a sharp and angular surface profile.
Galvanised steel	The surface shall be clean, dryand appear with a rough and dullprofile.	Light brush blasting using non- metallic abrasive leaving aclean, rough and even pattern.
Shop primed steel	Dry, clean and intact shopprimer.	Abrasive swept or alternatively blasted to Sa 2 (ISO 8501-1) ofat least 70 % of thesurface.
Coated surfaces	Clean, dry and undamaged compatible coating	Clean, dry and undamaged compatible coating

Optimum performance, including adhesion, corrosion protection, heat resistance and chemical resistance is achieved with recommended surface preparation.

Application

Application methods

The product can be applied by

Spray:	Use airless spray.
Brush:	Recommended for stripe coating and small areas. Care must be taken to achieve the specified dry film thickness.
Roller:	May be used for small areas. Not recommended for first primer coat. Care must be taken to achieve the specified dry film thickness.

Product mixing ratio（by weigt)

JDGuard4431	Comp A	4.8 part(s)
JDGuard4431	Comp B	1 part(s)

Thinner/Cleaning solvent

Thinner: Jindun Thinner No. 103

Guiding date for airless spray

Nozzle tip (inch/1000):	17-27
Pressure at nozzle (minimum):	150 bar/2100 psi

Drying and Curing time

Substrate temperature	-10℃	-5℃	0℃	5℃	10℃	23℃	40℃
Surface (touch) dry	26 h	14 h	10 h	6 h	5 h	2 h	1 h
Walk-on-dry	96 h	48 h	30 h	16 h	10 h	5 h	2 h
Dry to over coat, minimum	42 h	24 h	18 h	10 h	7 h	4 h	2 h
Dried/ cured forimmersion	18 d	9 d	5 d	4 d	3 d	2 d	1 d
Dried/ cured for service			21 d	14 d	10 d	7 d	3 d

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

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

Surface (touch) dry: The state of drying when slight pressure with a finger does not leave an imprint or reveal tackiness.

Walk-on-dry: Minimum time before the coating can tolerate normal foot traffic without permanent marks, imprints or other physicaldamage.

Dry to over coat, minimum: The recommended shortest time before the next coat can be applied.

Dried/cured for immersion: Minimum time before the coating can be permanently immersed in sea water.

Dried/cured for service: Minimum time before the coating can be permanently exposed to the intended environment/medium.

Induction time and Pot life

Paint temperature	23℃
Induction time	5min
Pot life	1.5h

Heat resistance

	Temperature	
	Continuous	Peak
Dry, atmospheric	120℃	140
Immersed, sea water	50°C	60°C
Immersed, crude oil	60 °C	70 °C

Peak temperature duration max. 1 hour.

The temperatures listed relate to retention of protective properties. Aesthetic properties may suffer at these temperatures.

Note that the coating will be resistant to various immersion temperatures depending on the specific chemical and whether immersion is constant or intermittent. Heat resistance is influenced by the total coating system. If used as part of a system, ensure all coatings in the system have similar heat resistance.

Product compatibility

Depending on the actual exposure of the coating system, various primers and topcoats can be used in combination with this product. Some examples are shown below. Contact Jindun for specific system recommendation.

Previous coat: inorganic zinc silicate shop primer, epoxy, zinc epoxy, zinc silicate

Subsequent coat: acrylic, alkyd, epoxy, polyurethane, polysiloxane, vinyl epoxy, epoxy mastic, vinyl epoxy

Packaging(typical)

		Weight (Kg)	Size of containers (litres)
JDGuard 4431	Comp A	18.24	20
JDGuard 4431	Comp B	3.8	4

The volume stated is for factory made colours.

Storage

The product must be stored in accordance with national regulations. Keep the containers in a dry, cool, well ventilated space and away from sources of heat and ignition. Containers must be kept tightly closed. Handle with care.

Shelf life at 23 °C

JDGuard 4431	Comp A	24	month(s)
JDGuard 4431	Comp B	24	month(s)

In some markets commercial shelf life can be dictated shorter by local legislation. The above is minimum shelf life, thereafter the paint quality is subject to re-inspection.

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 Jindun'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 Jindun representative for approval before commencing the work.

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.

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.

Disclaimer

The information in this document is given to the best of Jindun's knowledge, based on laboratory testing and practical experience. Jindun's products are considered as semi-finished goods and as such, products are often used under conditions beyond Jindun's control. Jindun cannot guarantee anything but the quality of the product itself. Minor product variations may be implemented in order to comply with local requirements. Jindun reserves the right to change

the given data without further notice.

Users should always consult Jindun for specific guidance on the general suitability of this product for their needs and specific application practices.