JDCH160 Epoxy Cargo Hold Coating

Product description

This is a two-component, polyamine-cured pure epoxy coating. It is a fast-drying, low-surface-preparation, abrasion- and impact-resistant, high-solids, high-build product. Specially designed as a high-performance coating for cargo hold interiors. It can be used as a primer or topcoat in atmospheric and immersed environments. Suitable for properly prepared carbon steel and shop-primed steel substrates. It can be applied at surface temperatures below 0°C. Colour changes may occur after ballast discharge, but these will not affect the protective properties of the product.

Typical use

Marine: Specially designed for cargo holds and hatch coamings, providing long-lasting performance.

The fast curing of the coating enables cargo vessels to be put into service in a short time. Complies with FDA regulations and holds a grain carriage certificate. Can be used in cargo ballast tanks.

Approvals and certificates

- Tested by the Newcastle Occupational Health Agency, UK, approved for grain carriage.

Colours

Red, grey, light yellow

Product data

Property	Test/Standard	Description
Solids by volume	ISO 3233	72±2%
Gloss level (GU60°)	ISO 2813	matt
Flash point	ISO 3679 Method 1	31°C
Density	calculated	1.37Kg/L
VOC-China	GB/T23985-2009(ISO11890-1)	236g/L

The data listed is based on laboratory testing; actual factory batch production may vary slightly. All data is valid only for the mixed coating.

Film thickness per coat

Typical recommended specification range

Dry film thickness	100µm - 250µm
Wet film thickness	140µm - 345µm
Theoretical spreading rate	7.2 m²/L · 2.9 m²/L

Surface preparation

To secure lasting adhesion to the subsequent coat, all surfaces must be clean, dry and free from contamination.

Surface preparation summary table

Substrate	Surface preparation	
	Minimum	Recommended
Carbon steel	St 2 (ISO 8501-1)	Sa 2½ (ISO 8501-1)
Shop primed steel	Dry, clean and intact approved shop primer	Sa 2 (ISO 8501-1)
Coated surfaces	Clean, dry and undamaged compatible primer (in compliance with ISO 12944-4 6.1.4).	Sa 2½ (ISO 8501-1)

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

Application

Application methods

The product can be applied by the following methods

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 the first primer coat. Care must be taken to achieve the specified dry film thickness.

Product mixing ratio (by volume)

JDCH160 Epoxy Coat. Comp A	3
JDCH160 Epoxy Coat. Comp B	1

Thinner / Cleaning solvent

Thinner : Jindun 103 Thinner

Guiding data for airless spray

Pump ratio (minimum)	42:1
Nozzle tip (inch/1000):	19-25
Pressure at nozzle (minimum):	150 bar/2100 psi
Nozzle output (litres/minute):	1.3-2.2
Filter (mesh):	70

Several factors affect the pressure at the nozzle and must be monitored to maintain the recommended pressure at the nozzle. Factors causing pressure drop include:

- Longer hose or hose bundle
- Extended suction/draw-up line
- Hose with too small an internal diameter
- High paint viscosity
- Oversized nozzle tip
- Insufficient air capacity of the compressor
- Incorrect or clogged filter

Drying and curing time

Substrate temperature	-5°C	0°C	10°C	23°C	40°C
Surface (touch) dry	22 h	14 h	5 h	2.5 h	1 h
Walk-on-dry	48 h	24 h	10 h	5 h	2 h
Dry to overcoat, min.	48 h	24 h	10 h	5 h	2 h
Dried/cured for service	/	14 d	5 d	4 d	3 d

Drying and curing times are determined based on temperature and relative humidity below 85 %, and at a dry film thickness within the average DFT range. New building: The drying/curing-to-service interval of this product is the minimum time before the first cargo loading. Surface (touch) dry: The state of drying when slight pressure with a finger leaves no imprint or tackiness. Walk-on-dry: The minimum time before the coating can tolerate normal foot traffic without permanent marks, imprints or other physical damage. Dry to overcoat, minimum: The recommended shortest interval before the next coat can be applied. Dried/cured for service: The minimum time before the coating can be permanently exposed to the specific environment/medium.

Induction time and pot life

Paint temperature	23°C
Pot life	1h

Heat resistance

	Temperature	
	Continuous	**Peak**
Dry, atmospheric	120°C	120°C
Immersed, sea water	50°C	60°C

Peak temperature duration: maximum 1 hour. At the temperatures listed above, protective properties are unaffected, but aesthetic properties may be affected. Note that the coating will withstand different immersion temperatures depending on the specific chemical and whether immersion is continuous or intermittent. Heat resistance is influenced by the total coating system. If used in conjunction with other coatings, ensure all coatings in the system have similar heat resistance.

Product compatibility

Depending on the actual exposure conditions in service, this product can be used with various primers and topcoats. Some examples are given below. For a specific system, please contact Jindun. Previous coat: epoxy. Subsequent coat: epoxy, modified epoxy.

Packaging (typical)

	Net volume (litres)	**Size of containers (litres)**
JDCH160 Epoxy Coat. Comp A	15	20
JDCH160 Epoxy Coat. Comp B	5	5

The packaging specifications above are typical references for factory batch production. Packaging specifications and volumes may vary by region due to local regulations.

Storage

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

Shelf life at 23 °C

JDCH160 Epoxy Coat. Comp A	12	month(s)
JDCH160 Epoxy Coat. Comp B	12	month(s)

The above is the minimum shelf life; thereafter, inspection is required to determine whether the quality remains acceptable.

Caution

This product is for professional use only. Applicators and operators shall be trained, experienced, capable and equipped to mix/stir and apply the coating correctly in accordance with Jindun's technical documentation. Applicators and operators shall use appropriate personal protective equipment when using this product. This guidance is given based on the current knowledge of the product. Any suggested deviation to suit site conditions shall be approved by the responsible Jindun representative before use.

Health and safety

Please observe the safety notices displayed on the container. Use under well-ventilated conditions. Avoid inhaling spray mist and avoid skin contact. Spillage on the skin should be immediately removed with suitable cleanser, soap and water. In case of contact with eyes, flush thoroughly with water and seek medical attention immediately.

Colour variation

When applicable, products primarily intended for use as primers or antifoulings may have slight colour variations from batch to batch. Similarly, fading and chalking may occur under weathering exposure to sunlight.

Disclaimer

The information provided in this data sheet is based entirely on the knowledge gained in our laboratory and in practice. Jindun's products are considered as semi-finished goods, and the use of the products is generally beyond our control. Jindun therefore guarantees only the quality of the product itself. Products may be adjusted as appropriate to comply with local regulations, and we reserve the right to modify this data sheet without prior notice. Users should consult Jindun for specific guidance on the suitability of the product for their own needs and specific applications.