JDSI790 HB Polysiloxane Topcoat

Product description

This is a two-component, high-solid, environmentally friendly topcoat based on organic-inorganic hybrid technology, forming a film on a high-bond-energy Si-O-Si molecular main chain. The coating has excellent long-term gloss and colour retention and chalking resistance. The film is hard and dense, with outstanding salt spray resistance, chemical corrosion resistance, and abrasion and impact resistance. The product contains no isocyanate and has extremely low VOC emissions.

Typical use

Suitable for the protection of steel structures exposed over the long term to harsh atmospheric environments such as high salt spray, strong UV radiation and high heat and humidity, where high standards are required for both long-term corrosion protection and decorative appearance; widely used in heavy-duty corrosion protection projects such as cross-sea bridges, wind turbine towers, offshore platforms, large storage tanks, chemical pipe racks, airport terminals and stadiums.

Protective coating suitable as a topcoat in C1-C5 and CX atmospheric corrosive environments.

Colours

Matched to colour chart

Product data

Performance	Test/Standard	Description
Solids by volume	ISO 3233	63±2%
Gloss (GU 60 °)	ISO 2813	Low gloss
Flash point	ISO 3679 Method 1	27℃
Density	Theoretical value	1.4Kg/L
VOC - China	GB/T23985-2009(ISO11890-1)	322g/L

The data listed are based on laboratory tests and may vary slightly in actual factory batch production.

All data are valid for the mixed white paint; data for other colours may vary slightly.

Film thickness per coat

Typical recommended specification range

Dry film thickness	60μm - 120μm
Wet film thickness	95μm - 190μm
Theoretical spreading rate	0.13Kg/m^2 - 0.26 Kg/m^2

Surface preparation

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

Surface preparation summary table

Substrate	Surface preparation	
	Minimum	Recommended
Painted surfaces	Clean, dry and intact compatible primer (in compliance with ISO 12944-4 6.1 standard).	Clean, dry and intact compatible primer (in compliance with ISO 12944-4 6.1 standard).

Application

Application methods

The product can be applied by

Spray: Use air spray or airless spray.

Brush: Recommended for stripe coating and small areas. Care must be taken to achieve the specified dry film thickness

Product mixing ratio (by weight)

JDSI790 HB Polysiloxane Topcoat Component A	14 parts
JDSI790 HB Polysiloxane Topcoat Component B	1 part

Thinner/Cleaning solvent

Thinner: Jindun 109-8 Thinner

Guiding parameters for airless spray

Nozzle tip (mm): 0.4~0.5

Pressure at nozzle (minimum): 15MPa

Drying and curing time

Substrate temperature	5℃	10℃	23℃	40℃
Surface (touch) dry	8 hours	5 hours	3 hours	1.5 hours
Walk-on-dry	48 hours	36 hours	24 hours	16 hours
Dry to overcoat, minimum	24 hours	24 hours	12 hours	8 hours
Dried/cured for service	15 days	10 days	5 days	3 days

For maximum overcoating intervals, please consult Jindun technical personnel.

The drying and curing times are measured based on temperature and relative humidity, with relative humidity below 85% and dry film thickness within the average dry film thickness range.

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

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

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

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℃
Pot life	2 hours

Heat resistance

	Temperature	
	Continuous	Peak
Dry, atmospheric environment	150℃	200℃

It resists most oils, aliphatic petroleum products and non-aggressive chemicals in spillage situations.
The peak temperature can be tolerated for a maximum of one hour.
At the above temperatures, the protective properties are not affected. However, the appearance may be affected.

Product compatibility

Depending on the actual exposure conditions in service, this product can be used in combination with different primers and topcoats. Some reference systems are shown below. For specific systems, please contact Jindun.
Previous coat: epoxy, zinc-rich epoxy, modified epoxy, polyurethane
Subsequent coat: polysiloxane coatings

Packaging (typical)

		Weight (Kg)	Container size (litres)
JDSI790 HB Polysiloxane Topcoat	Component A	21	20
JDSI790 HB Polysiloxane Topcoat	Component B	1.5	2

Application conditions

Painting work should normally be carried out under climatic conditions of above 5℃, with the substrate temperature more than 3℃ above the dew point and relative humidity below 85%.

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

JDSI790 HB Polysiloxane Topcoat	Component A	12	month(s)
JDSI790 HB Polysiloxane Topcoat	Component B	12	month(s)

The above is the minimum shelf life, after which testing is required to determine whether the quality is acceptable.

Caution

This product is for professional use only. Applicators shall be trained, experienced and capable, equipped with suitable equipment, and shall mix, stir and apply the coating in accordance with Jindun's technical documentation. Appropriate personal protective equipment shall be worn during operation. This guideline is based on current product information; any application adjustment made to suit site conditions must be approved in advance by an authorised Jindun representative before it is carried out.

Health and safety

Please observe the precautionary notices on the container. Use under well ventilated conditions. Avoid inhaling spray mist. Avoid skin contact,

In case of contact with skin, wash immediately with a suitable cleaner, soap and water. In case of contact with eyes, rinse thoroughly with water and seek medical attention immediately.

COLOUR VARIATION

When used, products intended primarily as primers or antifoulings may show slight colour variations from batch to batch.

DISCLAIMER

The information provided in this data sheet is based entirely on the knowledge gained in our laboratory and in practice. Jindun products are regarded 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 appropriately 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.