

WANARMOR®ES680

Solvent-Free Epoxy

Paint

Product Description

WANARMOR® ES680 is a two-component, solvent-free polyamine-cured epoxy coating specifically designed for immersion environments and lining protection in severe corrosion conditions.

Product Characteristics

The cured paint film exhibits excellent resistance to fresh water, seawater, crude oil, and abrasion. It is tough and highly adhesive, forming a seamless base-top coat system with outstanding impermeability and water resistance.

Recommended Uses

Suitable for internal lining protection of offshore, onshore, and underground storage tanks and pipelines, covering corrosion prevention for the inner walls of metal, non-metal, and concrete structures in industries such as water treatment plants, power plants, chemical plants, and fertilizer plants. Also suitable for coating compartments requiring high cleanliness and corrosion resistance, such as drinking water tanks on ships.

Technical Specifications

Physical Parameters

Color	White
Gloss	Semi-gloss
Specific Gravity	Approx. 1.5 kg/L
Solids By Volume	Approx. 100%
Theoretical Spreading Rate	3.3 m ² /L, DFT: 300 µm
Flash Point	138°C
VOC	20g/L

Surface Preparation

New Construction (New Steel): Surface free of oil, dirt, impurities, etc. Sandblasting treatment to achieve ISO 8501-1:2007 standard Sa 2½ grade.

Repair Work: Remove loose contaminants such as surface oil. Sandblasting to Sa 2½ grade is recommended; manual cleaning to St 3 grade is acceptable. Requirements may be appropriately relaxed for localized areas difficult to treat.

Application Guidance

Application Method

Airless spraying, brushing, rolling.

Mixing Ratio

Mass Ratio: 5(Base) : 1(Hardener)

Pot Life: 40 minutes/20 °C

Hardener

CES6800

Thinner

Cleaning Agent: WANARMOR® TH003

Film Thickness

Film Thickness	
Wet Film	300 µm
Dry Film	300 µm

Drying Time

Surface Temperature	20°C
Surface Dry	6 hours
Hard Dry	15 hours

Overcoating Interval

Product Name	10°C			20°C			30°C		
	Moderate Atmospheric Conditions								
Solvent-Free Eoxy Paint ES680	Lowest	40 hours		16 hours		8 hours			
	Highest	12 days		5 days		5 days			
Immersion Conditions									
	Lowest	40 hours		16 hours		8 hours			
	Highest	12 days		5 days		5 days			

Ambient Temperature

5°C~40°C. Avoid application when relative humidity exceeds 85%.

Surface Temperature

Above the dew point by 3°C or more.

Recommended Method

Tools	Application Parameters
Airless Spray	Nozzle Pressure: 25 MPa
	Nozzle Size: 0.48-0.79mm

WANARMOR®ES680 can be applied using airless spraying, roller coating, or conventional spraying.

Mixing and Thinning

WANARMOR®ES680 is a two-component product with a pre-determined mixing ratio. First, stir the Base until uniform and free of lumps for no longer than 2 minutes. Then slowly add the hardener and stir for 3 minutes. Use a variable-speed power mixer. Avoid over-stirring, as this accelerates curing and shortens product life. High temperatures reduce the pot life, while low temperatures extend it. Do not dilute this material.

Packaging and Storage

Packaging

Two-component, 27 kg combination packaging.

Storage

Products must be stored in accordance with national regulations. Keep in a cool, well-ventilated area away from heat and ignition. Containers must be kept tightly closed.

Shelf life

1 year

Safety Precautions

Warning

May cause eye and skin irritation. Vapors may cause respiratory irritation in sensitive individuals. May cause skin sensitization. Avoid breathing vapors. Avoid contact with eyes and skin. Use eye, ear, and skin protection, and wear an appropriate respirator to avoid potential respiratory irritation. After use, thoroughly wash skin with water. If discomfort occurs, consult a physician. Wash clothing before reuse. If breathing has stopped, perform artificial respiration, preferably mouth-to-mouth, and seek medical attention. Burns: Exothermic reactions may cause product to become excessively hot. Handle mixtures with caution. Wear gloves. First Aid: If product contacts eyes, immediately flush with water for at least 15 minutes. Remove contaminated clothing and shoes. Wash exposed skin with soap.

Before and during use, observe all safety labels on the packaging. Consult the Safety Data Sheet and comply

with relevant national or local government safety regulations.

Statement

The information listed in this document is reliable. Each value provided is calculated as theoretical data based on the product formulation. Upon request, our company can disclose the internal standard measurement methods used to determine any of the above data. Since usage conditions are beyond the manufacturer's control, this information is provided without warranty. The product is intended for professional use only. For any inquiries, please contact our company.

Our Technical Support and Customer Service Center is available to provide consultation and application technical services regarding the product. We welcome your inquiries via mail or phone. National Customer Service Hotline: 400-059-1116 ext. 3.