

WANARMOR®ES100

Solvent-Free Moisture-Resistant Epoxy Coating

Product Description

WANARMOR®ES100 is a high-performance, solvent-free, heavy-duty corrosion-resistant modified epoxy coating designed for steel surfaces. This environmentally friendly formulation is compatible with both dry and wet surfaces, new and old steel substrates, adheres tightly to rust spots, and bonds securely to existing coatings. It can be applied as a primer, intermediate coat, or topcoat.

Product Characteristics

No harmful solvent vapors are emitted. It possesses exceptional impact resistance, is non-flammable, and exhibits outstanding chemical resistance. There are no dew point restrictions or relative humidity issues. It offers superior corrosion resistance and strong adhesion to substrates, reducing surface preparation costs. No special surface treatment is required to achieve good adhesion.

Recommended Uses

Shipbuilding, seaports, offshore metal structures, metal structures, and underground tunnels: Metal structures such as bridges, hydropower equipment, vehicles, and military facilities, as well as concrete surfaces of underground plant buildings, tunnels, and pipelines. Suitable for direct application to the inner and outer walls of drinking water pipelines, fuel pipelines, or oil pipelines, as well as various storage tanks.

Technical Specifications

Physical Parameters

Color	Gray, or as per user requirements
Gloss	Semi-gloss
Specific Gravity	Approx. 1.5 kg/L
Solids By Volume	Approx. 100%
Theoretical Spreading Rate	10 m ² /L, DFT:100 µm
Flash Point	>100°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. 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 : 50 minutes/20 °C

Hardener

CES1000

Thinner

Cleaning Agent : WANARMOR®TH003

Film Thickness

Film Thickness	
Wet Film	100 µm
Dry Film	100 µm

Ambient Temperature

10°C to 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®ES100 can be applied using airless spraying, roller coating, or conventional spraying.

Mixing and Thinning

WANARMOR®ES100 is a two-component product with pre-measured proportions. First, mix the Base until

uniform and free of lumps for no longer than 2 minutes. Then slowly add the hardener and mix for 3 minutes. Use a variable-speed power mixer. Avoid overmixing, as this accelerates curing and reduces product lifespan. High temperatures shorten the mixture's pot life, while low temperatures extend it. Do not dilute this material.

Ventilation

Maintaining good ventilation in enclosed spaces is crucial for the safety of construction personnel and for ensuring the proper performance of this product. Air must be dry, as this product cannot be applied when humidity exceeds 85%.

Packaging and Storage

Packaging

Two-component, 25 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.