WANSHIELD®EM668 High-Toughness Epoxy Mortar

Product Description

WANSHIELD®EM668 High-Toughness Epoxy Mortar is formulated from modified epoxy resin, eco-friendly active diluents, hydrophilic amine curing agents, and composite fillers. It delivers outstanding mechanical properties, concrete compatibility, and chemical stability, with exceptional adaptability to damp substrates. Specifically designed for repairing concrete surface defects, sealing voids, and providing full-coverage coating, it is particularly suited for rapid repair projects in humid environments.

Product Characteristics

The Product Characteristics high solids content and low odor, comes in ready-to-mix proportioned packaging, and offers excellent chemical stability with convenient application. It exhibits high adaptability to damp substrates (tolerates moisture without standing water), provides strong adhesion to various substrates, and is environmentally safe. It is an ideal choice for concrete repair and protective coating applications.

Recommended Uses

Primarily used for surface repair treatment of concrete structures in hydraulic spillway facilities; sealing and protective treatment for various concrete surface defects such as air bubbles and pitting; and impermeability and anti-carbonation protection treatment for all types of concrete surfaces.

Technical Specifications

Physical Parameters

Initial setting time	50 mins
Compressive strength	≥60 MPa
Tensile strength	≥10 MPa
Thermal compatibility	Dry heat cycle, wet heat cycle; no surface defects
Bond strength	≥3.0 MPa
Impact resistance	≥8 times

The values provided herein represent typical test results; actual data may vary slightly depending on environmental conditions. For our company's products, the listed data is not legally binding.

Application Guidance

Application Conditions

Coating environment temperature range: 5 – 35℃

Coating environment humidity range: 30 – 85%

Application Method

Scraping and coating.

Mixing Ratio

Mass ratio: A:B:C = 3:1:8

Pot life: 1h/25 ℃

Ventilation conditions

Ensure the work area is well-ventilated and dust-free, but avoid strong winds that could carry in dust and affect the surface finish. For the safety of workers and to ensure the product performs correctly, all sections of the work area must have adequate ventilation.

Application Steps

Surface Preparation

Clean loose particles, debris, and stains from the concrete surface. Rinse with high-pressure water and allow to air dry. Remove laitance, oil, release agents, etc. If honeycombing or pitting is present, chisel out and thoroughly clean the affected areas, ensuring the substrate remains dry. For smooth substrates, roughen the surface using an angle grinder or wire brush before application. For enhanced adhesion, apply an epoxy primer to the substrate and allow it to dry before proceeding with repairs.

Mixing Ratios

The mixing ratio by weight is:

Component A: 30 parts

Component B: 10 parts

Component C: 80 parts

Adjust ratios based on actual site conditions. Mix at low speed for at least 5 minutes or manually until a uniform paste consistency is achieved. The mixed repair mortar must be used within 30 minutes.

Application

Before application, thoroughly clean the concrete substrate to remove loose slurry, oil stains, release agents, etc. Apply the mixed mortar using specialized repair tools (e.g., trowel, scraper, float) by pressing it into the repair surface. Apply in a single pass in the same direction as quickly as possible, minimizing repeated applications. The single-pass application thickness of epoxy mortar is typically 0.5 – 2 mm. If multiple layers are required, apply the next layer while the previous layer is still tacky after initial setting.

Post-Application Care

After application, cure the material. Avoid direct sunlight, rain exposure, water immersion, or impact from hard objects until the material is fully cured.

Packaging and Storage

Packaging

Three-component system: Component A: 20kg/drum Component B: 20kg/drum or 6.7kg/drum Component C: 25kg/bag

Storage

Product storage must comply with national regulations. Store in a cool, well-ventilated area away from excessive heat. Containers must be securely sealed.

Shelf Life

1 year

Safety Measures

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.