

# Product Technical Manual

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TDS Number:

Product Name: Wanhua Impact- and Abrasion-Resistant Epoxy Mortar

Version: V 1.0

## Product Introduction

Wanhua Impact- and Abrasion-Resistant Epoxy Mortar is a novel polymer alloy material composed of island-type modified epoxy resin, environmentally friendly reactive diluents, hydrophilic aliphatic amine composite curing agents, nano-wear-resistant inorganic fillers, and UV-resistant filler additives. It offers excellent mechanical properties, strong resistance to suspended abrasive particles, superior weather resistance, and low sensitivity to moisture. This product is recommended for: Impact and abrasion protection on concrete surfaces; Repairing surface imperfections such as uneven bubbles and pitting; Coating applications on entire concrete surfaces for comprehensive protection.

## Product Features

Exceptional impact and abrasion resistance with superior weather resistance;

High bond strength compatible with various substrate materials;

Low sensitivity to moisture, adaptable for construction on dry or non-free-water surfaces;

High solid content, low odor, and environmentally friendly to both humans and ecosystems;

Pre-proportioned packaging for simple preparation and excellent construction workability.

## Product Applications

Impact- and abrasion-resistant protective treatment for concrete surfaces of hydraulic discharge structures;

Sealing and protective treatment for surface bubbles and pitting defects on various concrete substrates;

Anti-seepage and anti-carbonization protective treatment for concrete surfaces.

## Physical and Chemical Properties

Item		Value
Curing Time (25°C,h)	Surface Dry	≤2
	Hard Dry	≤24
	Figure-8 Mold Method (Dry)	≥4.0 (or Mortar Failure)
Bond Strength (MPa)	Pull-off test	≥2.5 (or Substrate Failure)
	Interlayer Bond of The Substrate	≥8.0
Compressive Strength (MPa)		≥90
Tensile Strength (MPa)		≥18
Elastic Modulus (MPa)		2000
Tensile Shear Strength (MPa)		≥15
Impact-Abrasion Resistance (h/ (kg / m <sup>2</sup> )) (Underwater Steel Ball Method)		450
Sandy Water Flow Impact-Abrasion Resistance (h/ (g / cm <sup>2</sup> )) (Circular Ring Method)		100
Linear Expansion Coefficient (*10 <sup>-6</sup> ) /°C		≤24
Artificial Accelerated Aging Test (h)		720 Passed
Carbonation Depth		No carbonation
Environmental Performance (Cured Product)		Practically Non-Toxic Category
Impermeability (1.0mm,2MPa,24 hours)		Impermeable

The values provided in this document are typical test values, and specific data may vary slightly depending on environmental conditions. For our company's products, the listed data are not legally binding.

### Usage Precautions

**Substrate Preparation:** Clean the concrete surface to remove loose particles, debris, and stains. Use high-pressure water cleaning followed by natural drying.

**Spot Patching:** To ensure uniform full-coating application without bubbles, expand small pores on the substrate and perform spot patching using epoxy mortar.

**Material Preparation:** Mix components A and B at a weight ratio of A:B = 4:1. Stir thoroughly for 2–3 minutes until fully homogeneous. For large batches, use mechanical mixing at a low speed (600 rpm). To avoid mixing errors, mix entire batches of components A and B together.

**Application:** Apply the mixture within the operable time. For thickness buildup requirements, apply in multiple layers. Ensure each layer is not excessively thick; subsequent layers can only be applied after the previous layer has cured.

**Curing:** Curing time for epoxy mortar depends on ambient temperature, batch size, and applied thickness. Typical dry curing duration is 7 days at 25°C. Lower temperatures may require extended curing periods.

**Critical Requirements for Buyers:** Conduct trials under conditions identical to the actual construction environment to verify the reliability of the grout system for the specific project. By proceeding with formal construction, the buyer is deemed to have confirmed the product's performance. Any failure to adhere to the above procedures shall render the buyer solely responsible for consequences.

#### Packing Details

Component A: 16 kg or 4 kg drums

Component B: 4 kg or 1 kg drums

#### Storage (Usage) Precautions

Store in a cool, dry place.

#### Expiration Date

The product should be kept in a dry, cool indoor environment. It has a shelf life of at least 12 months under airtight conditions.

#### Safety Precautions

Our company provides technical consultancy services but assumes no supervisory responsibility. If users, engineers, or contractors dispute or reject our recommendations, they shall bear sole responsibility for any specialized construction procedures. If the material comes into contact with skin, immediately remove contaminated clothing and wash thoroughly with water. If the material enters the eyes, immediately flush with copious amounts of water for at least 15 minutes and seek medical attention. If

accidentally swallowed, seek immediate medical attention and provide the product's Safety Data Sheet (SDS) to healthcare professionals.

**For more information, please refer to the Safety Data Sheet (SDS) of our products or contact our Customer Service Center.**

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The indicators and data provided in this document are based on our current level of technical knowledge and practical experience, and are for reference only. Specific guaranteed indicators are subject to the quality assurance certificate or supply contract. The user is responsible for testing the products purchased from our company to verify their suitability for their intended processes and applications, and to achieve the desired objectives. Further application and processing of our products are beyond our control. Therefore, our liability for the products provided is limited to the portion delivered by us and used by you. We do not assume responsibility for indirect losses incurred during the production process using our products as raw materials. Our technical support and customer service center are available to provide consultation and technical services related to our products. We welcome your inquiries and communication via mail or phone.

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