

Product Technical Manual

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TDS Number:

Product Name: Wanhua Solvent-Free Epoxy Grouting Material

Version: V 3.1

Product Introduction

Wanhua Solvent-Free Epoxy Grouting Material is a two-component, solvent-free epoxy chemical grout. It exhibits high strength, low shrinkage, excellent corrosion resistance, and strong adhesion to concrete and metal substrates, making it ideal for reinforcing and repairing concrete and rock structures. The solvent-free formulation is insensitive to moisture, offers extended operable time, and achieves rapid strength development.

Product Features

Solvent-free with outstanding environmental performance;

Low viscosity and superior injectability;

Minimal shrinkage compared to conventional solvent-based low-viscosity grouts;

High bond strength to concrete and metal components;

Exceptional comprehensive mechanical properties with moderate toughness.

Product Applications

This product is widely used for: Reinforcement of cracks in concrete and rock structures across hydraulic engineering, bridges, highways, subways, tunnels, channels, and industrial/civil buildings; Bonding and reinforcement of metal components to concrete substrates.

Physical and Chemical Properties

Item		Value
Appearance	Component A	Colorless Liquid
	Component B	Pale Yellow Liquid
Density (g/cm ³ , 25°C)	Component A	1.10±0.05
	Component B	0.90±0.05
Initial Viscosity of Mixed Grout (mPa s , 25°C)		≤100
Compressive Strength (MPa)		≥80
Tensile Strength (MPa)		≥30
Tensile Shear Strength (MPa)		≥8.0
Bond Strength (MPa)		≥4.0 (or Mortar Failure)

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

Joint Surface Cleaning: Remove surface calcium deposits and debris. Clean drill holes and joint grooves using compressed air.

Drilling Grout Holes and Embedding Pipes: Drill holes straddling the crack or angled through the joint surface for pipe embedding. For low-pressure grouting, high-strength fast-curing epoxy mortar or epoxy putty may be used to adhere grout boxes along the joint. Space grout holes 20–30 cm apart, adjustable based on crack width.

Joint Sealing: Seal the joint with high-strength epoxy mortar or putty to prevent grout leakage. Alternatively, chisel a square groove along the joint, fill it with high-strength cement mortar or polymer-modified cement mortar, and apply a layer of high-strength epoxy mortar after drying.

Leakage Inspection: Apply soapy water to the joint surface and use compressed air to check for air leaks in grout holes and seals. Re-seal any leaking areas.

Grout Preparation: Mix components at the recommended ratio (A:B = 4:1 by weight). Stir for at least 2 minutes until homogeneous. Adjust batch size based on injection speed. To maintain low viscosity, prepare small batches frequently. If reaction is too rapid, reduce Component B (adjustable ratio A:B = 3:1 to 6:1).

Grouting: Set grouting pressure according to project requirements. Vertical cracks: Proceed from the bottom upward; Horizontal cracks: Grout from one end to the other, closing outlets sequentially to ensure full saturation.

Surface Finishing: After 1–2 days of grout curing, remove pipes, fill holes with mortar, and apply 1–2 coats of epoxy mortar for a smooth finish.

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

Component B: 4 kg

Storage (Usage) Precautions

Store in a cool, dry place.

Expiration Date

24 months when stored in a cool, dry place.

Safety Precautions

If the material comes into contact with skin, immediately remove contaminated clothing and wash thoroughly with water and soap. 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. Dispose of surplus product in accordance with local regulations. Do not pour into drains, water bodies, or soil.

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

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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