

# Product Technical Manual

Revision Date: 2025-01-17

TDS Number: WHS\_006

Product Name: Single-Component Solvent-Based Polyurea Waterproof Coating

Version: V3.1

## Product Introduction

Single-component solvent-based polyurea waterproof coating is a high-performance, aliphatic, and high-strength product. Formulated with modified resins, special latent curing agents, and ester solvents, this coating cures into an elastic film when exposed to ambient temperature and humidity. It exhibits excellent adhesion, waterproofing, and abrasion resistance on substrates such as concrete, natural stone, ceramics, mortars, masonry structures, steel structures, and epoxy coatings. The product is easy to apply and ideal for flood discharge channels, overflow tanks, dam surfaces, expansion joints, construction joints, and other critical infrastructure.

## Performance Features

1. High Thixotropy & Low Viscosity: Easy application with superior flow control.
2. Exceptional Mechanical Properties: Outstanding impact resistance and tensile strength.
3. Advanced Durability: Resistance to abrasion, chemicals, and harsh environments.
4. Long Gel Time & Fast Surface Drying: Facilitates multi-layer application without compromising integrity.

## Product Applications

A single-component, ready-to-use solution ideal for waterproofing, anti-seepage, and corrosion protection in:

- Hydraulic structures (dams, spillways, retaining walls)
- Industrial facilities (workshops, factories)
- Residential buildings
- Transportation infrastructure (bridges, tunnels)

## Key Performance Indicators

Item	Index	Unit	Test Method
Appearance	Single-component, viscous liquid	-	JC/T 2435-2018
Solid Content	≥82	%	JC/T 2435-2018
Surface Drying Time	≤3	h	JC/T 2435-2018
Full Curing Time	≤6	h	JC/T 2435-2018
Tensile Strength	≥20	MPa	JC/T 2435-2018
Elongation at Break	≥200	%	JC/T 2435-2018
Tear Strength	≥60	N/mm	JC/T 2435-2018
Bond Strength	Concrete	3	MPa JC/T 2435-2018
	Steel	8	

## Substrate Preparation

### 1. Concrete:

- Remove loose surface layers to expose solid substrate.
- Ensure dry, dust-free conditions; fill pores with specialized repair putty.
- Apply primer after surface treatment.

### 2. Steel:

- Blast-clean to Sa2.5 finish; remove dust and apply primer.

### 3. Other Substrates:

- Consult Wanhua Energy Saving Technology (Yantai) Co., Ltd. for tailored solutions.

## Construction Conditions

- Temperature: 5–35 °C (ambient and substrate temperature > dew point +3 °C).
- Humidity: ≤80% RH; concrete moisture content <6%.
- Ventilation: Avoid strong airflow to maintain coating integrity.

### Application Methods

Brushing, rolling, spraying.

## Packing Details

- Size: 5 kg/barrel, 20 kg/barrel.
- Usage: Ready-to-use upon opening.

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## Storage (Usage) Precautions

- Storage: Store in cool, dry, well-ventilated areas away from sunlight, rain, and heat sources (10–35 °C).
- Shelf Life: 6 months from production date (unopened). Extend shelf life with periodic testing post-expiration.
- Transportation: Ensure leak-proof, rainproof packaging; comply with transportation safety regulations.

## Expiration Date

6 months from production date under proper storage conditions.

**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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