

# Product Technical Manual

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Product Name: Polyurea waterproof coating for urban utility tunnels

Version: V 3.1

## Product Introduction

Polyurea waterproof coating for urban utility tunnels effectively addresses waterproofing, anti-seepage, and anti-corrosion issues in substrates such as concrete and steel structures, thereby prolonging service life.

## Performance Characteristics

1. Rapid gelation and curing: Can be sprayed and formed on any curved, inclined, or vertical surfaces.
2. High solid content with zero VOC emissions, environmentally friendly
3. Achieves desired thickness in a single application: Eliminates need for multiple layers and associated defects.
4. Exceptional physical properties and chemical resistance.
5. Seamless, monolithic coating, skin-tight protective layer with no joints

## Product Usage

Primarily used in public facilities and urban utility tunnels.

## Technical Specifications

Item	Specification	Unit	Test Method
Appearance	Component A: Light yellow viscous liquid	-	GB/T 23446-2009
	Component B: Viscous liquid (color adjustable)		
Solid content	100	%	GB/T 23446-2009
Gel time	13	s	GB/T 23446-2009
Surface drying time	28	s	GB/T 23446-2009
Density	1.05	g/cm <sup>3</sup>	GB/T 23446-2009
Tensile strength	17	MPa	GB/T 23446-2009
Elongation at break	480	%	GB/T 23446-2009
Tear strength	70	N/mm	GB/T 23446-2009
Impact resistance	1.5	kg·m	GB/T 23446-2009
Impermeability	0.4MPa, 2h不透水	-	GB/T 23446-2009
Low-temperature flexibility	-40	°C	GB/T 23446-2009

## Substrate Preparation

Base materials shall be treated by grinding, sandblasting, or shot blasting.

Concrete substrates: Remove loose surface layers to expose the solid base. Ensure the surface is dry and free of standing water. Fill pores with specialized repair putty and apply compatible primer.

Steel substrates: Sandblast or shot blast to Sa2.5 grade. Remove dust and apply appropriate primer.

For other substrates, consult Wanhua EnergySav Technology Department.

## Construction Conditions

Ambient temperature range: 5-35°C, with substrate temperature  $\geq 3^{\circ}\text{C}$  above the dew point of ambient air.

Environmental humidity:  $\leq 80\%$  RH, and concrete substrate moisture content  $< 6\%$ .

Ventilation: Ensure no strong airflow in the construction area to avoid dust contamination compromising coating integrity

## Construction Method

Special high-pressure airless spraying equipment

## Packing Details

Component A: Net weight 220 Kg/drum

Component B: Net weight 200 Kg/drum

Mixing ratio: A:B = 1:1 (volume ratio)

## Storage (Usage) Precautions

Store in a cool, ventilated, and dry warehouse, protected from rain and direct sunlight. Keep away from ignition sources and heat sources. storage temperature is 10-35°C.

Shelf life is 12 months from production date in unopened original packaging. After expiration, the product can still be used if it passes the technical specifications.

Classified as non-hazardous goods (contains no organic solvents). Protect from rain and sunlight during transit; comply with transportation regulations.

Smoking and open flames are strictly prohibited in storage, transportation, and construction sites

## Expiration Date

The shelf life of polyurea waterproof coating for urban utility tunnels is 12 months from the date

of production when stored under specified 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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联系地址：山东省烟台市太原路56号，万华节能科技（烟台）有限公司

电话：400-059-1116    传真：(86)-0535-6809777    邮编：264006

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