Wanshield®63120-M4 Water-Based Polyurethane Mortar

Product Description

Wanshield®63120-M4 is a four-component water-based polyurethane mortar flooring material. Its composite structure combines nearly all the advantages of organic polymers and inorganic concrete. Primarily used as a water-based polyurethane mortar topcoat, it achieves a thickness of 0.3-1 millimeters. It features low tire noise, stain resistance, no peeling, high compressive strength, abrasion resistance, corrosion resistance, and temperature tolerance.

Product Characteristics

1. Chemical and Corrosion Resistance: Resists common organic and inorganic acids, alkalis, and salts;
2. Tensile Strength Exceeding Concrete, High Abrasion Resistance;
3. Greater Toughness Than Cementitious Products, Reducing Cracking Risk and Enhancing Impact Resistance.

Recommended Uses

1. Underground parking garages;
2. General storage areas in various factories;
3. Factory workshops (areas without thermal shock or mechanical impact);
4. Laboratories.

Technical Specifications

Physical Parameters

Compressive Strength (7d)/MPa	≥40
Flexural Strength (7d)	≥10
Abrasion Resistance (500g/100r)/g	≤0.15
Slip Resistance (Dry Friction Coefficient)	≥0.6
Tensile Bond Strength/MPa	≥2.0
Impact Resistance (1000g Steel Ball)	Surface free of cracks and flaking

Surface Preparation

Construction Conditions: The ambient temperature for coating application should range between 15-30℃. The substrate temperature must be at least 3℃ above the ambient dew point. Ambient humidity must be

<80%. The moisture content of concrete substrates must be below 10%. The work area must be well-ventilated and dust-free. Strong winds should be avoided to prevent dust ingress that could compromise surface appearance.

For all new and existing concrete surfaces, concrete strength must reach C25 or higher, with a pull-off strength not less than 1.5MPa. Surface stains and loose dust must be completely removed down to sound concrete. Any concrete damaged by chemical exposure, loose material, or contamination by any substance must be removed down to sound concrete.

For old painted surfaces, completely grind away loose or incompatible old paint coatings to expose the concrete substrate. Clean, dry, and intact compatible coatings may remain.

For oil-contaminated surfaces, where oil severely compromises the adhesion of the floor coating to the substrate, the oil must be completely removed and the surface ground.

For new concrete surfaces, ensure the curing period has been completed and the moisture content is below 10%. It is highly recommended to use mobile sandblasting equipment. Achieving the correct surface roughness through grinding is critical.

Application Guidance

Application Method

Squeegee coating

Serial Number	Mixing Procedure	Temperature	Stirring Time	Rotational Speed
1	Pour Component A into the mixing bucket			
2	Add Component B and Component D		1 min	300r/min
3	Add Component C	>35℃	1 min	＞800r/min
		15℃～35℃	2 mins	
		10℃～15℃	4 mins	
		<10℃	5 mins	

Surface coating:

Apply directly by rolling to the desired thickness.

Mix Ratio

Mass ratio: Component A : Component B : Component C = 4.12 : 4 : 5.27. Component D varies in weight depending on color.

Pot life: 25 minutes at 20℃. Higher temperatures reduce the usable time after mixing.

Application is generally not recommended when ambient temperature exceeds 30℃.

Thinner

No thinners may be added to the paint.

Film Thickness

	Film Thickness
Surface Coating	0.5-1mm

Drying time

Substrate Surface	**20℃**
Surface Dry	24 h
Fully Cured	7 days

Recoating Interval

Product Name		20℃
Water-Based Polyurethane Mortar Wanshield® 63120-M4	Lowest	24 h
	Highest	If more than 72 hours have passed or the surface has become contaminated, it must be re-sanded and vacuumed before applying the topcoat.

Ambient Temperature

15℃ to 30℃. Avoid application when relative humidity exceeds 80%.

Substrate Temperature

Above the dew point by 3℃ or more.

Mixing and Dilution

Wanshield®63120-M4 is a four-component product with precise ingredient ratios. Once the mixing time is determined, consistency must be maintained throughout the entire application process. Inconsistent mixing times per batch may result in surface color variations and differing textures.

1. During mixing, use a straight-edge trowel to scrape material adhering to the sides and bottom of the container. This operation should be performed at least once to ensure complete final blending.

2. Only mix the entire contents of the factory packaging. Temperature affects both application time and product curing time.

3. Mixing equipment may cause variations in flowability; use the recommended mixing paddle.

No thinners may be added to the coating.

Ventilation

Ensure adequate ventilation throughout the work area for operator safety and proper product performance.

Packaging and Storage

Packaging

Four-component system, approximately 14 kg combined package (total weight may vary slightly depending on the color paste in Component D).

Storage

Product storage must comply with national regulations. Storage and transportation conditions: Coatings should be stored in sealed containers at 5-30℃ in a dry, cool, and well-ventilated environment, away from high temperatures and open flames. During transportation, materials should be stacked securely to ensure the cargo compartment remains dry, enclosed, and protected from moisture and freezing.

Shelf Life

When stored under specified conditions, the shelf life of the product in its original packaging is 6 months from the date of manufacture.

Safety Precautions

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.