

Polyurethane (PU / Urethane) Elastomeric Waterproof Coating & Liquid Membrane

Polyurethane Waterproof Coating

Product Overview



Polyurethane (PU) waterproof coating, also known as polyurethane film waterproofing material, is a type of polymer waterproofing material with polyurethane resin as the main film-forming substance. It is a reaction- type coating formed by mixing isocyanate-terminated (-NCO) polyurethane prepolymer with a curing agent containing polyol (-OH) or amine (-NH2) groups, along with other additives, in a specified ratio. The product is classified by component into single-component (S) and multi- component (M). By basic performance, it is classified into Type I, Type II, and Type III. By exposure, it is classified as exposed (E) and non-exposed (N). By harmful substance limits, it is classified as Class A and Class B.

Product Features

Before curing, it is an amorphous viscous liquid. It is easy to apply on any complex substrate surface, and edge sealing is simple, ensuring reliable waterproofing quality. It forms a film through chemical reaction,contains almost no solvents, and has low shrinkage. It can be easily applied in thick layers. The cured film has no seams and excellent integrity. Cold application – safe operation. The film has rubber-like elasticity, good elongation, high tensile strength, and high tear strength. It has strong adaptability to substrate cracks within a certain range.

Applications



Suitable for waterproofing of various below-grade structures, kitchens, bathrooms, toilets; leak prevention for sewage tanks; waterproofing and anti-corrosion of underground pipelines; waterproofing for high-speed railways, bridges, and other structures.

Application Method

- Substrate requirements: Smooth, solid, and sufficiently dry (for below-grade work, no obvious wet spots is acceptable). Internal and external corners shall be rounded. Internal corner diameter shall be greater than 50 mm, external corner diameter greater than 10 mm.
- Mixing: According to the required amount, mix Component A and Component B at a ratio of 1:2. Stir evenly.
- Large-area application: Apply the mixed coating evenly using a rubber or plastic trowel. The thickness shall be uniform,typically 1.5 mm to 2.0 mm. Apply in 3 to 4 coats. Each subsequent coat shall be applied after the previous coat has cured and formed a film, and in a perpendicular direction.Reference consumption: approximately 1.5–1.7 kg/m² per 1 mm thickness (about 2.4 kg/m² for 1.5 mm thickness).Generally, the coating forms the waterproof layer by itself. For below-grade floor applications, an additional layer of carrier reinforcement material shall be added.
- Film thickness: For below-grade work: 1.2–2.0 mm, typically 1.5 mm. For bathrooms: not less than 1.5 mm. For exposed roof projects with multiple layers: each layer not less than 1.2 mm. For a single-layer roof waterproofing system with Grade III waterproofing requirement, the total thickness shall not be less than 2.0 mm. When a carrier reinforcement material is added between coating layers, the coating thickness under the carrier shall not be less than 1.0 mm, and the coating thickness above the carrier shall not be less than 0.5 mm.
- Edge and termination treatment: Apply an additional coat of coating to seal.
- Protection layer: The surface of the cured coating shall be protected according to design requirements to prevent damage to the coating.