WP100 Polyaspartic Polyurea Roof Waterproof Coating User Manual

Jiangmen Choi Sum Environmental Materials Co., Ltd.

Background

Roof waterproofing is one of the most critical aspects of building construction. Roofs are constantly exposed to external environments and influenced by climate and various external forces. Improper waterproofing can cause roof leakage, wall cracks, and mold, which not only affects people's health and daily life but also directly impacts the lifespan of the building. Polyaspartic polyurea roof waterproof coatings offer excellent waterproofing, thermal insulation, and weather resistance, along with good decorative effects. They remain colorfast and crack-free even after long-term outdoor exposure, effectively addressing concerns in roof repair and waterproofing.

Product Features

- **Excellent weather resistance**, service life over 20 years outdoors
- **Seamless system**, integrates waterproofing, anti-corrosion, and decoration
- **Safe and eco-friendly**, efficient and convenient construction

Technical Specifications

Property	**Value**
Color	Grey
UV Resistance	1500h: no chalking, no cracking, no peeling
Elongation	≥ 350%
Adhesion	≥ 4MPa (concrete substrate)
Solid Content	98±2%
Tensile Strength	≥ 16MPa
Pot Life	0.4h-1h (25℃)
Low Temperature Flexibility	No cracks (-40℃)
Surface Dry Time	1h
Abrasion Resistance	≤ 30 (750g/500r, mg)
Full Cure Time	10h-12h
Hardness	≥ 80A
Recoat Interval	10h-24h
Tear Strength	≥ 70kN/m
Mixing Ratio	Main agent : Hardener = 1:1 (by weight)

Application Scope

- Waterproof repair for small-scale building roofs and walls
- Waterproofing for various decorative surface materials

Coating Structure Diagram

1. Polyaspartic Polyurea Waterproof Layer
2. Sealing Primer Layer
3. Concrete Substrate

Construction Process

For Concrete Roofs:

1. Pre-treat the concrete base: grinding, dust removal, and cleaning of pits, voids, and loose particles. The base must be dry.
2. Apply sealing primer; wait 6-8 hours before the next step.
3. Apply the polyaspartic elastic waterproof material via rolling or scraping, recommended thickness 0.6mm (0.8kg).

For Metal Roofs:

1. Pre-treat the metal base: remove dust, rust, grease, etc.
2. Sand the metal surface. Intact coating should be roughened; rusty areas should be sanded to bare metal. Sharp edges should be rounded. Sanding grade: sa2.
3. Apply primer. For gaps, corners, edges, etc., manual brushing should be used to ensure coverage. No sagging or pinholes

allowed. Wait 8-12 hours before the next step.

4. At overlapping joints, anchor points, and rust holes, apply middle coat + fabric reinforcement + middle coat. Wait 6-8 hours before proceeding.
5. Apply top coat, ensuring no missing spots, sagging, or pinholes.

For Concrete Roofs (Extended Process):

1. Pre-treatment and surface preparation as above.
2. Grind base to a firm, flat surface. Ensure it's dry. V-shaped grooves (1–2cm wide and 1cm deep) should be made at expansion and crack joints.
3. Install ventilation pipes every 6m x 6m; pipe diameter: 6–8cm; drill holes slightly larger than pipe and deep enough to reach insulation layer. Fix pipes with material 8530.
4. Apply polyaspartic epoxy penetrating primer. Use pre-brushing for areas that are difficult to spray. Wait 8-12 hours before the next step.
5. Fill expansion and crack joints flush with the concrete surface. Joints wider than 2cm should be reinforced with fabric + middle coat.
6. Epoxy mortar layer: 0.4mm thickness, add quartz sand (70–100 mesh) at a 1:1.5 ratio. Wait 8-12 hours.
7. While applying mortar, treat internal corners with a rounded finish.

Fabric reinforcement based on site conditions.

8. Apply elastic waterproof midcoat (1mm, 1.2kg) with scraping. Wait 6–8 hours.
9. Apply weather-resistant elastic waterproof topcoat (0.15mm, 0.2kg) by rolling or spraying.

Transport & Packaging

- Avoid compression during transport; keep packaging intact.
- Store in cool, ventilated, dry conditions. Recommended storage temperature: 0℃–30℃.
- Shelf life: 1 year (unopened, under standard storage conditions).
- Packaging: Iron pail, 20kg/set.

Precautions

- A and B components must be mixed in the exact 1:1 weight ratio.
- No foot traffic within 48 hours after construction; allow at least 7 days of curing before use.
- Stir thoroughly; avoid localized settling.
- Substrate must be dry and dust-free before primer application.
- Each coating must be applied within the working time. Mixed material should remain usable for at least 40 minutes. If viscosity is high during application, add 5%–10% polyurea thinner.