

MPU WP12S SPRAY POLYUREA ELASTOMER



DESCRIPTION:

WP12S is 100% solid contents polyurea elastomer, fast-setting, two-component. It is with amino resin as the main component (part A) and aromatic isocyanate as the curing agent (part B). **WP12S** is specially designed to form a solid membrane once dry, completely adhered to the substrate, seamless, without joints or overlaps, watertight and waterproof membrane to be used on new buildings or refurbishments. It boasts exceptional waterproofing, anti-corrosion, and abrasion-resistant properties, making it widely utilized in both industrial and commercial sectors for effective anti-corrosion and waterproof protection. The formulation is solvent-free formulation making it an eco-friendly choice.

FEATURES:

High Flexibility:

WP12S can maintain elasticity over a wide temperature range, accommodating substrate settlement or movement and preventing cracking.

Chemical Resistance:

WP12S is resistant to a wide range of chemicals, including acids, alkalis, and solvents, making it suitable for industrial applications.

Adhesion Strength:

WP12S bonds strongly to various substrates, including concrete, steel, and wood, ensuring reliable and durable application.

CONSTRUCTION SITE:

It is primarily used as an exposed waterproof, protective, and anti-corrosive elastic coating, especially for high-deformation nodes and stress-concentrated detail areas in long-lasting waterproofing projects.

Applications include:

- Exposed elastic waterproofing for residential construction.
- Waterproofing of concrete detail nodes.
- Elastic coatings for anti-seepage at hydraulic joints and cracks.
- Exposed waterproof and wear-resistant coatings for bridges, flyovers, and air passages.
- Metal structure roofing with elastic waterproofing.
- Waterproofing for pools and tanks.
- Use with cement mortar and liquid cement.
- Elastic coatings for waterproof, anti-corrosion, wear-resistant floors, and protective applications.

DESIGN CRITERIA:

WP12S is designed for application in one application.

APPLICATION METHOD:

Previous preparation of the substrate according to its type. Existing holes or areas with a lack of material must be repaired. General cleaning of the substrate, removing existing dust, dirt, grease or efflorescence. The substrates must be resistant and cohesive. Check the maximum degree of moisture permittivity of the substrate.

Mix and stir the components using a mechanical shaker for approximately 4-5 minutes (medium speed). Apply the coating until the desired planimetry is achieved. Consumption between 1.1 kg/sqm to achieve 1mm thickness depending on the roughness of the substrates.

NOTE: For other types of substrates, weather conditions or final use, consult our technical department

TDS. TECHNICAL DATA SHEET



TECHNICAL DATA:

NO.	ITEM	VALUE
1	The weight of component A	220 kg
2	The weight of component B	220 kg
3	Density of mixed resin	1.16kg/l @23 °C
4	Volume ratio of cured components	Appr. 100%
5	Weight ratio of cured components	Appr. 100%
6	Shore A	Appr. 92 (14 days / +23 °C)
7	Tensile strength	Appr. 17 N/mm ² (14 days / +23 °C)
8	Abrasion Resistance (750g/500r/mg) ≤ 30	28.5
9	Elongation at brake	Appr. 46% (14 days / +23 °C)
10	Adhesive tensile strength	2.68 N/mm ² (concrete failure) > 3.0 N/mm ² (aluminum)
11	Mixing ratio (in volume)	1:1 (by volume)
12	Dosage	Appr. 1.16kg/m ²
13	Inter layer thickness	2.3 kg/m ² - The inter layer thickness is approximately 2 mm
14	Ambient atmospheric temperature	Minimum +10 °C / Maximum +30 °C
15	Relative humidity of air	Maximum 80% relative humidity
16	dew point	The substrate should be at least 3° above the dew point to reduce the risk of condensation and floor cracking.
17	Substrate temperature	Minimum +10 °C / Maximum +30 °C
18	Water content of the substrate	< 4% pbw
19	Operating time	10 °C @45min 20 °C @30min 30 °C @25min
20	Curing time	10 °C, 24 hours ~ 36 hours 20 °C, 18 hours ~ 24 hours. 30 °C, 16 hours ~ 20 hours.

CONSTRUCTION NOTES:

Mixing Ratio:

- The weight ratio of Component A to Component B is 1:1 (A:B).

Mixing Instructions:

- Mix the components thoroughly for 3–5 minutes manually or mechanically, until a uniform consistency is achieved.
- The mixed primer must be applied within 30 minutes using a roller or brush.
- NOTE: Do not add any thinning agents or foreign materials to the primer.

Application Timing:

- The next application should be conducted 3 hours after the primer becomes tack-free.
- If the next process is delayed beyond 24 hours after the tack-free time, an additional coat of primer must be applied.
- Reapply the primer if rain or adverse weather conditions occur after the initial application.

HEALTH AND SAFETY:

Respiratory Protection:

When handling or spraying, always use an air-purifying respirator to protect against inhalation of harmful substances.

Skin Protection:

Wear rubber gloves and remove them immediately if they become contaminated. Ensure your body is fully covered with clean, protective clothing. After completing work, and before eating, drinking, or smoking, wash thoroughly with soap and water.

Eye/Face Protection:

Wear safety goggles to prevent splashes or exposure to airborne particles.

Waste Management:

Minimize or avoid waste generation whenever possible. If waste is produced, incinerate it under controlled conditions in compliance with local and national regulations.

Re-occupancy Guidelines:

Do not re-enter the work area without respiratory protection for at least 24 hours after spraying, ensuring proper ventilation is maintained.

Compliance:

Contractors and applicators must adhere to all applicable storage, safety, and handling guidelines. These safety measures are critical during the implementation process, as well as before and after exposure to loading machinery.

Waste Disposal:

Dispose of all waste in accordance with state and/or local regulations.

These precautions are essential to ensure the health and safety of all individuals involved in the process

RECOMMEND TOOLS:

For spray polyurea application, a high-pressure proportioning unit, heated spray gun, and proper surface preparation tools are critical. Ensure all equipment is compatible with polyurea chemistry and maintain optimal environmental conditions.

RECOMMEND USAGE:

Normally, it is about 1.1 kg /m² , and the thickness of one-time construction is about 1mm.

PACKING:

Component A, 220kgs/pail,
Component B, 220kgs/pail.

STORAGE AND TRANSPORTATION:

The primer should be sealed and stored in a dry, cool, and well-ventilated area, away from direct sunlight, rain, and any sources of fire.

When kept in its original packaging and under the prescribed storage conditions, the product has a shelf life of 6 months from the date of production.

After opening the drum, please use the product as soon as possible and reseal the container when not in use.

The materials should be stacked stationary and handled carefully during transportation to avoid any violent collisions.

DISCLAIMER:

The information provided in this Technical Data Sheet (TDS) is to assist customers in determining whether our products are suitable for their applications. Our products are only intended for sale to industrial and commercial customers. We warrant that our products will meet our written liquid component specifications. The customers are advised to conduct their own tests and evaluations to ensure suitability for their intended application. Always follow local regulations, safety guidelines, and manufacturer recommendations.