eile DOUBLE POLIUREA

CE

Expandable, 100% Pure, Polyurea-Based Waterproofing and Coating Material

Description:
It is a hot polyurea system that can expand 4-5 times its original volume, applied using a special spray machine. It is a specially developed product for flawless waterproofing, thermal insulation, protection, and sealing. It fills height differences on rough (voids, protrusions) surfaces, providing a smooth surface. Ideal for surfaces like concrete, wood, asphalt, fabric, and sheet metal. No primer is required.

It is a two-component, solvent-free, UV-resistant, 100% pure product. As a result of the reaction, a membrane with mechanical and chemical resistance is formed on the applied surface. Thanks to these properties, it can be easily used for waterproofing and coating purposes on all types of surfaces.

Areas of Use:

- Sloped roofs, terraces, balconies, and protrusions
- Retaining walls, foundations, and basement walls
- Areas requiring shock absorption
- Can be used on rough surfaces or any type of curved area
- Decks of ships and coatings in marine facilities
- Ideal for surfaces like concrete, wood, asphalt, fabric, and sheet metal

Product Features:

- Quick response and fast return to service
- Seamless coating
- 100% solid, VOC-free, solvent-free
- Fills height differences on rough (voids, protrusions) surfaces, providing a smooth surface
- Expands 4-5 times its original volume
- Allows for application at the desired thickness
- Can be used on both horizontal and vertical surfaces
- Permeable to water vapor
- Excellent resistance to weather conditions

Application Procedure:

Surface Preparation:

- The surface must be solid and have sufficient strength. Do not apply over low-quality screeds. The substrate should have a minimum compressive strength of 25 MPa and a minimum adhesion strength of 1.5 MPa.
- Before application on fresh concrete, wait at least 28 days for the concrete to dry.
- The surface and ambient temperature should be at least 5°C and not exceed 35°C.
- The air humidity should not exceed 85%.
- Condensation on the surface must be avoided.
- Do not apply in the early morning.
- Do not apply on frozen, thawing surfaces or surfaces where rain is expected within 6-8 hours.
- The surface must be clean and dry, and anything that could hinder adhesion should be removed.
- Weak concrete on the surface must be removed if necessary.
- Expansion joints should be insulated with suitable polyurethane-based filling materials and expansion joint bands.
- For metal surfaces, standard sanding and polishing should be done in corrosive areas.

Application Method:
Preparing the Components: Before starting the application, the B component (amine resin) should be mixed for at least 30 minutes in the barrel until a homogeneous color is achieved. Mixing should continue during the application. The temperature of components A and B should be between 25-30°C before application. The components should not be diluted under any circumstances.

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Spray Machine Settings: Polyurea is applied to surfaces using a high-pressure, high-temperature spray machine. The machine settings should be checked continuously during the application.

Consumption:

- 1.5 kg/m² (for 1 cm thickness)

Parameters Data:

- Component A (MDI Prepolymer) Temperature: 65°C
- Component B (Amine Resin) Temperature: 60°C
- Hose Temperature: 60°C
- Machine Pressure: 140-160 bar
- After all preparations are complete, polyurea is applied to the surface with two coats sprayed at a minimum thickness of 2 mm.
- The mix ratio should be checked continuously to ensure the correct ratio by monitoring the machine pressure bar readings.

Mixing Ratio:

- A/B by weight: 112/100

If color stability is desired, an aliphatic topcoat should be applied. Aliphatic polyurethane paint, an aliphatic polyurea system, or a polyaspartic polyurea system can be used as a topcoat. The topcoat application should be done within 0-12 hours after the base coat.

Technical Specifications:
(Specific technical data not provided in the text but typically would include adhesion, tensile strength, and elongation.)

Points to Consider:

- No other material should be added to eile DOUBLE POLYUREA.
- Opened packages should be used completely and not left partially used.
- Do not dilute with any thinners.
- In areas exposed to continuous UV light, cover the surface with an aliphatic-based polyurethane topcoat.

Packaging:

- 225 kg (Component A - MDI Prepolymer)
- 200 kg (Component B - Amine Resin)

Storage:
Polyurea components are sensitive to moisture. Therefore, they should be stored in their original, unopened, and undamaged packaging between +10°C and +30°C. The products should be kept in dry places away from direct sunlight.

Shelf Life:
When stored under the recommended conditions and in its unopened packaging, the product has a shelf life of 9 months from the production date.

Tehcnical Specifications

Appearance	Component A: liquid; honey-colored Component B: liquid; gray
Viscosity (25°C, mPas)	Component A: 750±100 Component B: 500±50
Density (25°C, g/cm³)	Component A: 1,00±0,02 Component B: 1,10±0,02
Shore A Hardness	95±5
Elongation at Break (23°C, %)	(ASTM D412) ≥400
Tear Resistance (23°C, N/mm²)	(ASTM D638) ≥50
Tensile Strength (23°C, N/mm²)	≥18
Gel Time (seconds)	3-5
Application Thickness (mm)	2
Tack-Free Time (seconds)	10-15
Water Absorption	$W \le 0.1 kg/m^2.h^{0.5}$
Adhesion Test on Metal	≥21.5 N/mm²
Abrasion Resistance	≤3000 mg
Compressive Strength	≥50 N/mm²
Crack Bridging Ability	Static ≥1250 µm at +23°C, Class A4 / Dynamic: Class B3, 1 atm at -20°C
Water Vapor Permeability	CLASS III SD>50 m
Hazardous Substances	5.3/E COMPLIANT

Safety Recommendations: During application, appropriate workwear, protective gloves, goggles, and masks in accordance with occupational health and safety regulations must be worn. Avoid contact with skin and eyes; if contact occurs, wash thoroughly with plenty of water. In case of ingestion, seek medical attention immediately. Store out of the reach of children. No food or drink should be kept in the areas where the application is taking place.

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