

PENTENS SPU-1000

Pure Polyurea Waterproofing Spray Coating



Product Data Sheet



Description

PENTENS SPU-1000 is a solvent-free, environmentally friendly, low VOC, two-component pure Polyurea spray coating. The seamless coating provides an elastic yet tear-resistant surface for applications subject to extreme wear and tear, strong impact and chemical exposure. Except for some yellowing effect, the coating is also suitable for outdoor applications.

Uses

PENTENS SPU-1000 is suitable for indoor and outdoor application such as:

- RC roof slabs
- Potable water tank lining
- Sewage treatment plants
- Water theme parks, decorative design playgrounds
- Secondary containment for chemical tanks
- Swimming pools and waste water tanks
- Waterproofing
- Pipe/pipeline coating & lining
- Flooring and parking decks
- Bridge coating
- Truck bed liners
- Marine

Advantages

- Low VOC.
- Environmentally friendly.
- High elasticity.
- Strong and tough, extremely high mechanical properties.
- Seamless.
- Chemical resistance-very good resistance to a wide range of industrial chemicals.
- Hard-wearing.
- Outstanding impact resistance.
- Non-skidding.
- Excellent bond strengths to properly prepared surface.
- Fast set-return to service in minutes (often seconds).

Technical & Physical Data

Form	Liquid
Colour	Grey, Green, Pear Yellow etc.
Solids	100%
Hardness (Type A/1 sec) (ASTM D2240-05)	76
Tensile Strength (kgf/cm ²) ASTM D412-06a	> 150
Elongation (%) ASTM D412-06a	> 500
Tear Strength (kgf/cm ²) ASTM D624-00	> 70
Pull-off Adhesive Strength ASTM D4541	> 20 kgf/cm ² (Substrate: Concrete)
Abrasion Resistance (g) ASTM D4060-07 (H-18, 1000g, 1000 cycles)	< 0.1
Tack Free Time	30 seconds
Water Resistance (24hrs) ASTM D543-06	No abnormality
Acid Resistance (23°C/5%H ₂ SO ₄ /8hrs) ASTM D543-06)	No abnormality
Alkali Resistance (23°C/30%NaOH/8hrs) ASTM D543-06)	No abnormality
Gasoline Resistance (23°C/Unleaded Gasoline #95/48hrs) ASTM D543-06)	No abnormality
Heat Resistance (120°C/24hrs) ASTM D573-04)	No abnormality
Pliability (-40°C) ASTM D146-04)	No abnormality
Recommended Thickness	1.0 to 3.0 mm thick
Mixing Ratio	1 to 1 by volume
Shelf Life	12 months when unopened & undamaged
Storage Condition	Store in a dry, cool place
Packaging	
▪ In pails (A:B=20:20)	40kg /set
▪ In bulk drums (A:B=200:200)	400kg /set

Important Notes

1. Thoroughly agitate B part (resin blend) before use.

Green Label Test Data

Heavy Metals:

(EPA 3025 / EPA 6010B : ICP)

a. Cadmium (Cd)	Not Detected
b. Lead (Pd)	Not Detected
c. Total Chromium (Cr)	Not Detected
d. Mercury (Hg)	Not Detected

Volatile Organic Compounds (ISO 11890-2) (g/L)	< 1.0
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Total Halogenated Organic Solvent (ISO 11890-2) (%)	Not Detected
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Total Aromatic Organic Solvent (ISO 11890-2) (%)	Not Detected
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Epichlorohydrin (ISO 11890-2) (%)	Not Detected
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N-Methyl Pyrrolidinone (ISO 11890-2) (%)	Not Detected
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Formaldehyde (High Performance Liquid Chromatography) (%)	Not Detected
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Alkyl Phenol Ethoxylate (LCMS-MS) (%)	Not Detected
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Flash Point (ASTM D3828-07a) (°C)	>61
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Instruction for Use

Surface Preparation

All surfaces must be clean, free from grease, oil, and laitance. Remove all dirt and contaminants, which might affect adhesion.

Any cracks or water leakages should be pre-treated and reinforced with PENTENS Repair System. For more details, please refer to PENTENS Technical Department before the application of waterproofing.

Application

This material is designed for application with heated, plural component airless spray equipment. Because of the relatively high viscosity and fast reactivity of this product, pressure of 1800psi-2500psi (126-175kg/cm²) is required to ensure satisfactory mixing.

Primer coats: PENTENS E-10@ 0.2kg/m²/coat

Finish coats: PENTENS SPU-1000

- 1.0mm / 1.10kg /m²
- 2.0mm / 2.20kg /m²
- 3.0mm / 3.30kg /m²

Substrate Conditions (Concrete surface)

- Hardness: 15 MPa (28 days curing)
- Moisture content: 10% maximum
- Surface temperature: 5 to 30°C
- Relative humidity: max. 85%.

Curing

For optimum performance, PENTENS SPU-1000 should be allowed to cure for 12 hours before applying the finishing concrete, tiles etc. During this period of time, precautions must be taken to prevent any damage to the coating.

Cleaning

Hardened film can only be removed mechanically. Liquid components can be removed by using solvent Xylene or MEK.

Safety

Impervious gloves and barrier cream should be used when handling these products. Eye protection should be worn. In case of contact with eyes, rinse with plenty of water and seek medical advice if symptoms persist. If contact with skin occurs, it must be removed before curing takes place. Wash off with an industrial skin cleanser followed by plenty of soap and water. Do not use solvent. Ensure adequate ventilation when using these products.



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