

PENTENS NPU-12

Water-based Polyurethane Nano Coating

Product Data Sheet

Description

PENTENS NPU-12 is a nanotechnology HDI based polyurethane coating of finest quality, durable, water repellent, fungus/algae/bacteria resistant, UV resistant, scratch resistant, anti-corrosive sealer, primer & finish for a wide variety of exterior and interior surfaces.

Uses

Interior / Exterior applicable surfaces are including:

- Concrete
- Plaster
- Metal
- Stone

Areas of use are such as:

- Food and pharmaceutical industries
- Hospital and hygienic clean rooms

Advantages

- Outstanding adhesion
- High resistance to weathering and blistering
- Self-cleaning
- Excellent color retention, non-yellowing
- Zero VOC
- Additional features like termite-free, stain resistant and anti-sticking.
- Easy clean-up using water



Technical & Physical Data

Appearance (mixed)	Brushable / rollable / sprayable uniform liquid in color
Finish	Semi-gloss. Matt finish is available.
Color	Transparent (NPU-12T) & Multicolor (NPU-12C)
Pot life @ 25 ⁰ C	45-60 minutes
Re-coat Time	6 hours @ 25 ⁰ C and 50% RH
Full Cure @ 25 ⁰ C	3 days
Viscosity (Brookfield LVF, 30rpm, 25 ⁰ C)	1100 cps
Drying Time (touch dry)	4 hours
Tensile Strength	221 kgf/cm ²
Elongation	177 %
Tear Strength	88.7 kgf/cm
Hardness (Type D/1 sec)	66
Abrasion Resistance (H-22,1000g,1000cycles)	0.0854
Scrub Resistance (CNS10757)(2000cycles)	Pass
Weathering Resistance (ASTM G154)(2000h)	No change
Stain Resistance (CNS 10757)	No change
Chemical Resistance (CNS 4447)	No change
Heavy Metals (EN 71 Part 3)	Not detected
Potable Water Contact (CNS 10774)	Pass
Fungi Growth Test (ASTM G21)	None observed growth on specimens
Consumption	Approx. 0.15kg/m ²
Self life	12 months when unopened / damaged
Storage condition	Store in a dry cool place
Packaging	NPU-12A: 10 kg/pail NPU-12B: 1 kg/can

Disclaimer. All representations and recommendations set forth are given in good faith and to the best of our knowledge. However due to varying conditions and applications, the buyer shall conduct its own tests of this product before use. Under no circumstances will the manufacturer be liable for any loss or damages caused by incorrect usages. The sale of this product shall be on terms and conditions set forth on Pentens order acknowledgement.

Instruction for Use

Precautions for use

- The application and drying temperature must be between 10⁰C and 35⁰C.
- Do not apply to heavy duty industrial floor.

Surface preparation

Surface must be clean, smooth, dry, and free of wax, grease, oil, loose or peeling paint, and other foreign material.

Mixing

PENTENS NPU-12 must be mixed homogeneously prior to application, using an electrical or pneumatic power stirrer until a homogeneous mix is achieved.

Application

The mixed PENTENS NPU-12 should be applied to the prepared surface by using brush or lamb wool roller or spray equipment.

The second coat may be applied as soon as the first coat has initially dried (typically 4 to 6 hours). The time will be dependent on the type of surface and the ambient conditions.

New work

For maximum durability for exterior or interior application, use PENTENS T-009 as a primer & sealer, followed by two coats finish.

Refinish work

Follow conditions listed above. Previously painted, glossy surfaces should be lightly sanded. Remove old flaking paint and clean down thoroughly to remove any dust or powdery paint. Fill cracks with PENTENS EPTM as a sealer for best result. Spot prime all patched areas with PENTENS T-009 primer. Allow all primers to dry thoroughly before applying finish coats.

Coverage

Approximately 6~10 square meters per kg, depending on the porosity of the substrate.

Safety

PENTENS NPU-12 is non-toxic. For personal precautions, applicators are recommended to

wear gloves and goggles when handling PENTENS NPU-12. In case of contact with eyes, wash thoroughly with plenty of water and seek medical advice if symptoms persist.

