NIPPOSEAL PUREA-SA *(formerly known as Nippon LM Polyurea-SA-7102/SA-7103)*

Updated Apr'23

DESCRIPTION

NippoSEAL PUREA-SA is a rapid cure, 100% solids, elastomeric, environmentally friendly spray applied pure polyurea system, designed as a seamless and highly durable waterproofing and protective coating. **NIPPOSEAL PUREA-SA** is designed to spray with plural spray machine and thusto prevent human apply mistakes. Due to its high mechanical and durability characteristic. It is suitable for waterproof large flat roofs, inverted roofs, garden roofs, tunnels, high speed railways, tanks, below ground and bridge decks.

USES

NIPPOSEAL PUREA-SA is suitable for outdoor and indoor applications, such as:

- RC Roof and Metal Roof
- Open Cut Tunnels
- Railways and Viaducts
- Bridge Deck and Car Park Deck
- Power Plant
- Marine
- Landscape
- Podium deck and driveway
- Stadium
- Water theme park and Pool
- Decorative playground
- Secondary containment for chemical storage tanks
- Ponds and portable water tanks
- Sewage and waste water treatment plants
- Truck bed lining
- Tanks and pipe lining

ADVANTAGES

- 100% solid, zero VOC, environmentally friendly
- Immediate thickness build-up and waterproofing in seconds, and fast return to foot traffic service in minutes (30minutes).
- Highly elasticity
- Excellent crack bridging for both static and dynamic cracks
- Excellent abrasion and impact resistance
- Good chemicals (water, oils, alkali, diluted acids) resistance
- Excellent bond strength to properly prepared substrate
- Good corrosion resistance
- Skid resistance
- Easy and fast apply on complicated surface (more than 1000m2/day)
- Seamless and water-tightness
- Does not overload the structure
- Anti-root
- Elastic sound absorption and noise reduction

Product Type	Product	Pack Size	Finishing	Substrate
Liquid Applied Waterproofing Membrane	**NIPPOSEAL PUREA-SA** *(Spray Applied)*	Part A: 225kg Part B: 200kg Part C : 5kg	Satin Smooth or Texture	Concrete / Metal / Tile

Application Data

Mixing Ratio (Weight Ratio)	: Part A (Hardener): Part B (Resin) : Part C (Color Paste) = 225 : 200 : 5
Pot Life at 25°C, seconds	: 25
Drying Time at 25-30℃, seconds	: ≤ 120 (Touch Dry); ≤ 10 min (Full Dry)
Theoretical Coverage*, kg/m²	: 1.20 (at 1mm DFT); 0.20 (at 0.15mm DFT) (Actual coverage depends on substrate condition, application method, application condition, etc.)

Typical Technical Data

Form	: Liquid
Color	: Grey
Gel Time, seconds	: 25 sec
Drying Time, seconds	: 60 sec
Tensile Strength, N/mm²	: ≥ 20
Elongation at Break, %	: ≥ 300
Tear Strength, N/mm²	: ≥ 45
Water Penetration (0.4MPa, 2hrs)	: No Penetration
Adhesion Strength, MPa	: ≥ 1.5 (Concrete), ≥ 6 (Steel)
Low Temperature Bending (-40°C, 1hr)	: No crack
Water Absorption, %	: ≤ 5%
Abrasion Resistance (Wheel CS17/1000g/1000 cycles)	: 6
Abrasion Resistance (Wheel H18/1000g/1000 cycles)	: <125
Shore A Hardness	: 90
Heat Resistance	: Pass
Accelerated Weathering Resistance	: Pass
Alkali Resistance	: Pass
Salt Resistance	: Pass
Oil Resistance	: Pass
JC 1066-2008 Toxicity Test	: Pass
Shelf Life	: Up to 12 months in original tight sealed container
Compliances	: GB/T 23446-2009. JC 1066-2008, GB/T 1728-1989, GB/T 16777-2008, GB/T 531.1-2008, GB/T 529-2008

Application Method

Substrate Preparation

Concrete Substrate

The substrate must be thoroughly clean and dry, free from dust, algae, mildew, fungal, grease and oil. All the contaminants, previous waterproofing and impurity must be removed till bare substrate. Any cracks, honey combs, water leakage area should be repaired by **Nippon Paint Repair System** (for more detail, please refer to Nippon Paint Technical Department) before the waterproofing work proceed. The substrate must be sound and dry with no rising damp. The concrete surface should be flat and free from holes and undulations. Any holes and undulations should resurface with **Nippon Paint Scratch Coat System**. The surface should be clean smooth and cast to fall to allow water run-off.

This product is designed for plural spray application only.

Metal Substrate

For maximum performance, this product should be applied to a surface that has been blast cleaned to St3.0 or Sa2.5 (ISO 8501-1:2007) and suitably primed. The surface to be overcoated must be dry and free from surface contaminants. All wax, oil and grease should be removed by solvent cleaning in accordance to accordance with the guidelines complying to SSPC- SP 1. Soluble salts, dirt and dust must be removed prior to applying the waterproofing. Dry brushing should be sufficient. A freshwater wash must follow to remove all soluble salts. Always ensure maximum overcoating time for the primer has not been exceeded prior to application.

Priming

After preparation, the substrate shall be primed with **Nippon Paint PUREA-PRIME** for concrete substrate or **Nippon Paint PRIMET** for metal substrate. For concrete, suggested application rate is 300 ml per m2; For steel substrates, a rate of 150 ml per m2.

Broadcast of fire-dried sand is recommended for optimum adhesion properties.

Spray Equipment

A high-pressure spray proportioning machine/ spray gun for plural heated polyurea components such as those manufactured by Titan, GlasCraft or Graco should be used for this material.

Processing Parameters

Block Temperature	60℃ to 70℃
Hose Temperature	60℃ to 70℃
Volume Ratio	1:1
Hydraulic Pressure	750 – 850 PSI
Pressure	1600 – 2500 PSI
Gel Time	5 – 15 sec
Trafficable (Light-Duty)	15 – 30 minutes
Post Cure	24 hours
Fully Serviceable	7 days

Recommended Waterproofing System

Concrete Substrate (Conceal)

Primer	: NIPPON PAINT PUREA-PRIME	0.20 kg/m²
Waterproofing	**: NippoSEAL PUREA-SA**	**1.5 – 2.0mm**

Car Park Exposed Deck

Primer	: NIPPON PAINT PRIMECRETE WB	0.20 kg/m²
Waterproofing	**: NippoSEAL PUREA-SA**	**1.5 – 3.0mm**
Top Coat	: NippoSEAL SPARTIC-HA	0.3 – 0.5mm

Metal Substrate

Primer	: NIPPON PAINT PRIMET	0.20 kg/m²
Waterproofing	**: NippoSEAL PUREA-SA**	**1.5 – 3.0 mm**
Top Coat	: NippoSEAL SPARTIC-HA	0.3 – 0.5mm

Environmental Conditions During Application

- Apply temperature: 5-35°C. Do not apply when the surface to be coated is less than 3°C above the dew point.
- The humidity for application is 30-80%
- During application of the paint, naked flame, welding operations and smoking should not be allowed and adequate ventilation should be provided.

Storage and Transportation

This product should be stored at shaded or cool and adequate ventilation warehouse. The storage temperature should be 15-40°C. This product should be away exposure from rain, sunlight, source of flame and heat. When transporting, care must be taken. It is always kept container in a secure upright position.

Cleaning

Clean up equipment or tools with adequate cleaner (**Nippon Paint Thinner 7808S**) immediately after use.

Safety Precautions

- Keep container tightly closed and keep out of reach children or away from food and drink.
- Ensure good ventilation during application and drying.
- When applying, it is advisable to wear eye protection.
- In case of contact with eye, rinse with plenty of water immediately and seek medical advice.
- Remove splashes from skin by using soap or water.
- Dispose off any waste in accordance with the appropriate Environment Quality Regulations.

Note

*Theoretical Coverage is based on a mathematical formula and does not consider Loss Factor.

$$\left[\frac{Volume\ Solid\ \%\ x\ 10}{Dry\ Film\ Thickness\ (\mu)}\right] = m^2/lit/coat$$

This theoretical coverage rate has been calculated from the volume solids of the material and is related to the amount of coating applied onto a perfectly smooth surface without wastage. Variables like porosity of substrate, application method, dilution ratio, dry film thickness, opacity and so on will affect theloss factor and can vary from 30% - 50% or even more. For a practical coverage rate, due allowance should be made for atmospheric conditions, surface roughness, geometry of the article being coated, the skill of applicator, method of application etc. when estimating quantities required for a particular job.

The above information is given to the best of our knowledge based on laboratory tests and practical experience.

However, since we cannot anticipate or control the many conditions under which our products may be used, we can only guarantee the quality of the product itself. we reserve the right to alter the given without prior notice.