

NADREIN Coating



Product Description

NADREIN is a reinforced anti-corrosion material developed by PodLee Company in the United States. This product utilizes nano-scale silica sol and specialized corrosion-resistant components to form an interpenetrating network, providing exceptional resistance to various inorganic and organic acids, as well as solvents.

The unique molecular structure of NADREIN ensures high adhesion and fracture strength even under high-temperature conditions (302°F / 150°C) and severe thermal cycling loads, effectively preventing delamination and cracking of the paint film. Its molecular-level density blocks chemical media from penetrating the metal surface via capillary action, thereby eliminating corrosion.

PodLee's advanced design capabilities and manufacturing processes ensure NADREIN's superior corrosion resistance, excellent thermal shock resistance, and high tolerance to thermal cycling loads. Easy application via spraying and proven reliability in real-world applications worldwide make NADREIN a trusted choice.

Intended Uses

Suitable for internal and external corrosion protection of chemical storage tanks, pipelines, heat exchangers, and structural components in severely corrosive environments.

Advantages

Superior Corrosion Resistance – Ideal for harsh environments such as marine and chemical industries.

Thermal Cycling Load Tolerance – Enhances safety and reliability of protective coatings.

Easy Application – Spray-friendly formulation improves construction efficiency and reduces costs.

Typical Characteristics

Name		Test Data	Testing Standard
Cured Density (g/cc)		1.4	–
Solid Content (%)		52	ASTM D3960
Pencil Hardness (H)		2	ASTM D3363
Water Resistance (1000h)		Pass	ASTM D2247
Adhesion (psi/MPa)	Sandblasted Steel Plate	1160 (8)	ASTM D4541
Chemical Resistance (400 Days)	HCl (37%)	Pass	ASTM G20
	NH ₃ ·H ₂ O (30%)	Pass	
	NaCl (10%)	Pass	
Salt Spray Test (h)		10000	ASTM B117
Service Temperature (°F/°C)		-22 (-30) – 302 (150)	–

Package

9 KG/Kit (3 kg additional specialized thinner included).

Surface Preparation

Proper surface preparation is critical for optimal performance:

Degrease and desalinate surfaces. Rinse salt residues with freshwater in marine environments.

Clean surfaces and remove rust via mechanical sandblasting or power tools (rust removal grade: SA2.5 or ST3).

Wipe surfaces clean with a dry cloth to remove moisture and loose rust.

Mixing

Ensure ambient temperature is 50 – 104°F (10 – 40 °C).

Mixing ratio: 8:1 (By Weight).

Weigh components accurately and stir mechanically for 3 – 5 minutes.

Thinner content should not exceed 30% of the total mixture.

Application

Apply using a brush or roller.

Single-coat thickness: 40–60 µm.

Apply 2–6 coats depending on operating conditions. Consult PodLee agents for specific requirements.

Minimum recoating interval: 3 hours.

Coverage

Based on an 80 µm thickness: 1 kg kit will cover 6.25 m² (67 ft²)

Pot Life After Mixing

50°F (10°C) – 3 h, 70°F (25°C) – 2 h, 104°F (40°C) – 1 h.

Curing Schedule

Temperature	50°F (10°C)	70°F (25°C)	104°F (40°C)
Surface Dry (h)	3	2	1
Complete Curing (h)	24	18	12

Clean Up

Clean tools immediately after use with solvents (acetone, xylene, alcohol, etc.).

Storage

Store between 10 °C (50 °F) and 32 °C (90 °F).

Unopened product shelf life: 1 year.

Safety

Before using any products, review the appropriate Material Safety Data Sheet (MSDS) or Safety Sheet for your area. Follow standard confined space entry and work procedures, if appropriate.