DESCRIPTION

Nukote PA II is a high-solids, aliphatic polyaspartic polyurea coating. Nukote PA II displays virtually no odors (mild mint smell) and is moisture insensitive. This product has been specifically formulated to be used as a standalone protective coating or as a top coat for steel, wood, urethane foam, concrete, concrete block, masonry, brick and other types of prepared and primed surfaces in aggressively corrosive environments. Nukote PA II is extremely stain resistant with a high gloss finish and displays excellent UV weathering and corrosion protection characteristics. The product can be applied in temperatures ranging from-4 °F to 140 °F (-20 °C to 60 °C). When fully cured, Nukote PA II will produce a highly abrasion resistant, high-gloss, chemical resistant smooth finish. As a top coat Nukote PA II will provide color stability and added UV protection and durability to numerous aromatic coatings.

FEATURES

- High solids , Zero VOC
- Fast Cure, high productivity , high film build up in single coat
- Virtually no odor
- High gloss finish
- Low temperature curing -4 °F (-20 °C)
- Moisture insensitive
- Non yellowing and good weathering
- Adheres well to several substrates
- Displays excellent UV resistance
- High tensile strength
- Flexible
- Stain Resistance
- Excellent corrosion protection

TYPICAL USES

- Architectural Finishes and structural Protection
- Cold storage areas, Industrial warehouses, chemical plants, pulp and paper mills, fertilizer plants
- Pipeline barges, off-shore oil platforms
- Protective coating for steel, concrete structures in chemical and corrosive environments
- Protective coating in aggressive processing plants and industries
- Metal Fabrication and Online Shop painting Facilities
- Railcars, coaches, Wagons, Marine vessels and other utility vehicles
- Electric Poles, Wind mills, offshore structures,
- Food processing areas, Industrial kitchens and Cold storages
- Pharmaceuticals as an Aseptic coating for Sterile areas
- Laboratories and clean room coating
- Amusement and water park facades and features
- Concrete floor coatings in manufacturing and processing plants
- Heavy pedestrian and vehicular parking decks
- Internal and external coating of concrete and steel basins, tanks and pools

COLORS

Standard colors are dolphin grey, tan and clear. Custom colors blended to match any RAL number, are available upon request subject to minimum order quantity. Contact NCSI for availability

TECHNICAL DATA (All values @ 77 ºF / 25 ºC)	US	Metric
Solids by volume (ASTM D2697)	92 %	92 %
Volatile organic compounds (ASTM D2369)	0 lbs./gal	0 gr/lit
Theoretical coverage	375 ft^2/gal @ 4 mils	9.2 m^2/ lit @ 100 microns
Specific Gravity of materials (ASTM D792)	A: 9.51 lbs./gal B: 8.85-10.7 lbs./gal	A: 1.14 kg/ lit B:1.06-1.28 kg/ lit
Viscosity at 77 ºF /25 ºC in cps ±10% (ASTM D4878)	A-300±200 B-pigmented 1400±300, B-clear 1000±300	
Shelf life @ 77 ºF /25 ºC	12 months	12 months
Elongation (ASTM D412-C)	Pigmented: 50 ± 10, Clear: 70 ± 10	
Tensile Strength (ASTM D412-C)	3000 ± 200 psi	21 ± 1.5 MPa
Hardness (ASTM D2240)	65 ± 2 Shore D	65 ± 2 Shore D
Tear strength (ASTM D 624)	400 ± 100 pli	70 ± 18 kN/m
Flexibility (2mm mandrel ASTM D522)	Pass	Pass
Impact Resistance (ASTM G14), No Holidays	> 175 in-lb.	> 18 J (N-m)
Flash point - pensky martin	>200 ºF	>93 ºC
Application temperature	-4 ºF to 140 ºF	-20 ºC to 60 ºC
Abrasion Resistance (ASTM D4060) weight loss	< 25 mg loss Taber CS 17 wheel 1Kg/1000 rev	
PROCESSING PROPERTIES (Under standard lab conditions) (@ 77 ºF / 25 ºC)		
Mix Ratio V/V	1 : 1	
Pot life (1 gallon)	30-40 minutes	
Tack free time (DFT & Temperature dependent)	3 – 4 hours	
Maximum recoat time	36 hours	
Light Foot Traffic	8 hours	
Heavy pedestrian traffic	24-48 hours	

*Properties and values are highly dependent on equipment, spray gun, mix chamber temperature, pressure and related parameters. Variations are possible and expected. * Exempt solvents not accounted.*

PACKAGING

10-gallon (38-liter) kits, shipped in plastic pails of 5 gallons (19 liters) each of side A and side B
2-gallon (7.5-liter) kits, shipped in 1 gallon (3.78 liters) side A and 1 gallon (3.78 liters) can side B

COVERAGE

Theoretical spread rate is 106 ft^2/gal at 14 mils (2.6 m2/liter at 350 microns) for metals. Recommended DFT for concrete is 20 mils (500 microns) and the spread rate is about 75 ft^2/gal (1.85 m2/liter) on normal primed concrete. Spread rate is dependent on the porosity of concrete and the coverage will vary.

STORAGE

Twelve months in factory delivered, unopened drums. Store on pallets and keep away from extreme heat, freezing, and moisture. Store at temperatures between 50 °F to 100 °F (10 °C to 37 °C). Avoid cyclic temperature and freezing by all means.

MIXING

Nukote PA II Part A and Part B should be mixed individually before combining. Add Part B to Part A while mixing, using a mechanical mixer at medium speed. Mix until a homogenous mixture and color is obtained (at least 5 minutes) and mix frequently during application to maintain uniform color. Use care to scrape the sides of the container to ensure that no unmixed material remains. PA II is ready to be applied but 5% thinner might be added when utilizing airless spray equipment. Use care to scrape the sides of the container to ensure that no unmixed material remains. Use caution not to whip air into the material as this may result in pinhole blisters and/or shortened pot life. Do not mix any material that cannot be used within 20-30 minutes. Mix only the quantity that can be used during the pot life. Discard material when the mixed material start gelling and do not try to re-use by adding thinner. Mixing this product manually by hand is not recommended.

SURFACE PREPARATION

Concrete:
The surface of a concrete subfloor should be dry, smooth, structurally sound and free of depression, scale, or foreign deposits of any kind. Remove all curing compounds. Abrasive blast, sweep blast or water blast to remove all latent material and expose voids. Use a good quality epoxy filler or mortar for void and spall filling, skim coat or repairs. Prime, fill imperfections in the substrate surface to limit out-gassing. All concrete substrates, on or below grade level should be tested for moisture content. On-grade or below-grade concrete floors or slabs should have a moisture barrier installed to protect from ground moisture. The surface preparation of concrete should meet and conform to Joint NACE 6/SSPC-SP 13 standards and achieve a concrete surface profile of CSP 2 to CSP 5 as per ICRI Guideline No.03732 for optimum performance.

Metal:
All surfaces should be clean and free from contamination. The surface should be assessed and treated in accordance with ISO 8504, Abrasive blast the surface to minimum NACE-2/SSPC SP-10/Sa 2.5, as per ISO 8501-1, for a visual assessment of surface cleanliness with an anchor profile of 2 to 3 mils (50 -75 microns). Soluble salts must be removed to an acceptable levels. ***Refer to NCSI surface preparation manual for detailed procedures for different types of substrates.***

APPLICATION

It is best to apply when surface and ambient temperatures are between 50°F and 100°F (10°C and 40°C) and the humidity below 85%.
It can be applied at any thickness of 8-12 mils (200-300 microns) in a single pass on horizontal surfaces or multiple passes on vertical surfaces.
This product can be applied by several methods including high-pressure plural component spray systems, HVLP spray systems, air-assisted cup gun spray systems, airless spray, roller, or brush. An airless pump 45:1 or higher is recommended Nukote PA II is applied over properly primed, repaired substrates in the method most suitable for the application type at a DFT of 14 mils (350 microns) and higher for abusive application. The recommended tip size is 0.017-0.019. Use solvent resistant bristles or Mohair. Use solvent resistant Phenolic core or equal natural roller covers.
For an anti-skid surface, broadcast clean, dry, fine aggregate into the first coat of PA II. Sweep off the excess aggregates after the first coat has cured and apply the second coat to seal and cover aggregates.
At 75°F (24°C) and 50% relative humidity, allow each coat to cure 3-4 hours. Cure time will vary depending on temperature and humidity.
Allow 6 hours before permitting light pedestrian traffic and at least 24-48 hours before permitting heavy pedestrian traffic on to the finished surface.
Uncured Nukote PA II is very sensitive to heat and moisture. Higher temperatures and/or high humidity will accelerate the cure time. Use caution in batch sizes and thickness of application. If more than 48 hours passes between coats, re-prime the surface with Premera AE T7 or T7LF before proceeding.
Low temperature and/or low humidity extend the cure time.

EQUIPMENT CLEAN UP

Equipment should be cleaned with an environmentally safe solvent, as permitted under local regulations, immediately after use.

LIMITATIONS

Keep away from sparks, open flame, pilot lights and other sources of ignition. Protect from moisture. Not suitable for continuous chemical immersion application. Provide adequate ventilation and ensure proper protective and safety equipment during application. Keep containers tightly closed. Containers that have been opened must be used as soon as possible.

WARNING

This product contains Isocyanate and curatives.

CHEMICAL RESISTANCE

Each Nukote product formulation has varying levels of resistance to specific chemicals. Please review the chemical test data included in the Nukote Test Book for general resistance to specific chemicals at specific concentration levels. Chemical concentrations are complex and when combined with temperatures above ambient levels this complexity increases exponentially.

Contact Nukote Technical Personnel for specific recommendations for chemical resistance prior to specifying these products in this application type. Consult with NCSI for more details on product and chemical resistance.
The following chart is the results of product tested for chemical resistance as per ASTM D 1308

Chemicals	Resistance	Chemicals	Resistance
Hydrochloric acid up to 10%	R	Ammonium Hydroxide 20%	R
Sulphuric Acid 10%	R	Ammonium Hydroxide 50%	RC
Phosphoric Acid 10%	R	Potassium Hydroxide 20%	R
Citric Acid 5%	R	Potassium Hydroxide 50%	RC
Acetic Acid 10%	RC	Diesel Fuel, Gasoline (unleaded)	R
Detergents	R	Motor Oil, Brake Oil	R
Seawater	R	Hydraulic Oil	**R**

R- Resistant extended contact, RC – Short term exposer ,splashes and spills Slight surface change,discolouration may occur

WARRANTIES AND DISCLAIMERS

Nukote Coating Systems International, a Nevada, USA Corporation warrants that the two components of this product shall conform to the technical specifications published in the product literature. The quality and fitness of the product is dependent upon the proper mixture and application of the components by the applicator. Nukote Coating Systems has no role in the application of the finished polymer other than to manufacture and supply its two components. It is vital that the person applying this product understands the product and is fully trained and certified in the use of plural component equipment and application of plural component materials. There are no warranties that extend beyond the description on the face of this instrument, except when provided in writing, directly by Nukote Coating Systems International and executed under seal by a company officer.