

DESCRIPTION

Nukote AL is a fast set, rapid curing, 100% solids, flexible, aliphatic; two-component spray polyurea that can be applied to suitably prepared interior or exterior concrete and metal surfaces. As an aliphatic polyurea, Nukote AL offers 100% color stability for applications where color fading is not acceptable.

It's extremely fast gel time makes it suitable for applications down to -30°C. It may be applied in single or multiple applications without appreciable sagging and is relatively insensitive to moisture and temperature allowing application in most temperatures and climates.

FEATURES:

- Excellent thermal stability
- Zero VOC
- 100% color stable
- Meets USDA criteria
- Seamless
- 100% solids
- Low Temperature flexibility
- Good chemical resistance
- Interior or exterior applications

TYPICAL USES

Nukote AL is typically used as a topcoat over other NCS polyurea coating including Nukote HT, Nukote ST, Nukote BM or Nukote CG. While Nukote AL can be used as a standalone product, most of the applications make its use as a topcoat or as a composite to be more cost effective. Nukote AL has been used in a number of applications where an architectural finish is required.

COLORS

Standard range of grays and black. Custom colors, blended to match any RAL number, are available upon request

PACKAGING

Pack Size 38 litre kits in plastic pails (19 lit A: 19lit B)
 380 litre metal drums (190 lit A: 190 lit B)

Side A and Side B are separately packed.

TECHNICAL DATA

(Physical properties-Typical Values)

Solids by Volume	: 100 %
Volatile Organic Compounds	: 0 gm / lit
Theoretical coverage @ 1mm	: 0 m ² / lit
Weight per liter	: A: 1.056
	: B: 1.052
Viscosity at 25° C in cps (ASTM D 412)	: A.900
	: B.115
Shelf life up to 50 °C (months)	: 12 to 18
Tensile strength - ASTM D 412 C (Mpa)	: 20 to 25
Elongation ASTM D 412 (%)	: 350-450
Hardness (Shore D)	: 45 to 55
Flexibility (3 mm mandrel ASTM 1737)	: Pass
Tear strength (Die C ASTM 624) (KN/m)	: > 70
Fire Rating	: Class 2
Flash point Pensky Martin	: >93°C
Service temperature (Dry)	: -32°C to 150° C
Service temperature (Immersion in Water)	: 80°C
Abrasion Resistance ASTM D 4060 (Taber CS17 1000 mg/ 1000 Rev)	: <20 mg loss

Processing properties under standard lab conditions

Mix Ratio V / V	: 1A: 1 B
Gel time (adjustable) (seconds)	: 10 to 15
Tack free time (seconds)	: 60 to 120
Post cure time (hours)	: 24
Block Temperature (°C)	: 70 to 80
Hose temperature (A & B) (°C)	: 70 to 80
Constant pressure (Bar)	: 140-150

CHEMICAL RESISTANCE ASTM D3912 (24 HOUR IMMERSION)

CHEMICAL	RESULTS @ 25 °C
Acetic Acid (5%)	R
Anti-Freeze	R
Brake Fluid (DOT3)	RC
Diesel Fuel	R
Gasoline	R
Hydrochloric acid (10%)	R
Motor Oil	R-DIS
Sodium Hydroxide (10%)	R
Sulphuric Acid (10%)	R-DIS
Transmission fluid	RC
Jet fuel JP4	RC
Xylene	RC

R: RECOMMENDED (NO VISIBLE DAMAGE), **RC** (CONDITIONAL RECOMMENDATION) WITH SOME EFFECTS LIKE WITHIN ONE HOUR TO AVOID EFFECTS) SWELLING, DISCOLORATION, CRACKING, WASH DOWN. **NR:** NOT RECOMMENDED. **DIS:** DISCOLORATION.

COVERAGE:

Nukote AL may be applied at any rate to achieve any desired thickness. Theoretical coverage for 1 mm thickness is one liter per m².

SURFACE PREPARATION:

Surface preparation is an important entity of the NCS coating procedures. Polyurea products are applied directly to the surface after suitable surface preparations and priming. Please consult NCS technical service team and refer the surface preparation manual.

Concrete:

The surface of a concrete subfloor should be dry, smooth, and structurally sound. It should also be free of depression, scale, or foreign deposits of any kind. Remove all curing compounds. Abrasive blast, sweep blast or water blast to remove all laitance and expose all voids. Use a good quality epoxy filler / mortar for blow hole filling, skim coat or repairs. All concrete subfloors on or below grade level should be tested for moisture. On-grade or below-grade concrete floors should have a moisture barrier installed to protect from ground moisture.

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 min SA 2.5 as per ISO 8501-1 for visual assessment of surface cleanliness with an anchor profile of 75 microns.

Refer to NCS surface preparation manual for more details

MIXING:

Nukote AL must not be diluted under any circumstances. Use appropriate solvent for purging line and flushing of equipment and if spraying stops for a period of time in excess of the pot life of the material. Thoroughly mix Nukote AL part B resin material with air driven power equipment until a homogeneous mixture and color is obtained.

APPLICATION

Nukote AL should be applied using 1:1 plural component equipment capable of developing a minimum of 2000 psi and heating the individual component to 76°C using an impingement gun. Hose temperature should be maintained at 70-76°C. The Nukote AL material should be preheated to 23-29°C. Nukote AL should be sprayed in multidirectional passes for a proper uniform thickness.

As an alternative use Decontamination solution 2.0 % liquid detergent and 3-8 % concentrated Ammonium Hydroxide in water (5-10% solution of Sodium Carbonate may be substituted as an alternate to the Ammonium Hydroxide).

EQUIPMENT CLEAN UP:

Cured product may be disposed off without restriction. The uncured isocyanate and resin portions should be mixed together and disposed off in a normal manner. "Drip free" containers should be disposed off according to local environmental laws and ordinances.

STORAGE

Nukote AL can have a safe life of twelve months to 18 months in factory delivered containers. Care is to be taken to keep away from extreme heat, freezing and moisture. The use of drum heaters is encouraged to reduce material viscosity at low temperatures.

LIMITATIONS

Do not open until ready to use, and store in a sealed container after opening. Adding a nitrogen blanket is strongly recommended.

WARNING:

This product contains isocyanate and curatives.

Before using Nukote products kindly read the product data sheets, material Safety data sheets (MSDS) and guide specifications prior to actual application. For details on training programs, technical guidance and updates on data sheets please contact the nearest Nukote office or representative.

Nukote Coating Systems International, LLC has a general product warranty and project specific warranties. Both warranties are backed by years of industry experience and insurance policies with a multinational insurance company. For information on the general product warranty please see below or contact NCSI for more information. For project specific warranties, these are available on a case-by-case basis. NCSI technicians must sign off on the specification, and in most cases a NCSI technician will be onsite during application to inspect surface preparation and application. For more detailed warranty contact a NCSI office.

LIMITED WARRANTY

NCSI warrants its products to be free of manufacturing defects. Polyurea and other multi-component products are technically manufactured at the time they are mixed. When mixed in accordance with NCSI guidelines, NCSI warrants the product will meet NCSI's technical specifications. NCSI warrants its products, when properly installed over a properly prepared substrate will perform as designed and specified.

Unless otherwise stated in writing, NCSI's sole responsibility shall be to replace the defective product. There are no other warranties by NCSI of any nature whatsoever expressed or implied, including any warranty of merchantability or fitness for a particular purpose in connection with this product. NCSI shall not be liable for damages of any sort, including remote or consequential damages resulting from any claimed breach of any warranty whether expressed or implied. NCSI shall not be responsible for use of this product in a manner to infringe on any patent held by others. In addition, no warranty or guarantee is being issued with respect to appearance, color, fading, chalking, staining, shrinkage, peeling, normal wear and tear or improper application by the applicator. Damage caused by abuse, neglect and lack of proper maintenance, acts of nature or physical movement of the substrate or structural defects are also excluded from the limited warranty. NCSI reserves the right to conduct performance tests on any material claimed to be defective prior to any repairs by owner, general contractor, or applicator.

DISCLAIMER

All guidelines, recommendations, statements, and technical data contained herein are based on information and tests we believe to be reliable and correct, but accuracy and completeness of said tests are neither guaranteed nor to be construed as a warranty, either expressed or implied.

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Test performance results were obtained in a controlled environment and NCSI makes no claim that these tests or any other tests accurately represent all environments.

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