

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 even slight color fading is not acceptable.

Its 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
- 100% color stable
- Seamless
- Low temperature flexibility
- Good chemical resistance
- Interior or exterior applications
- Zero VOC
- Meets USDA criteria
- 100% solids

TYPICAL USES

Nukote AL is typically used as a topcoat over another NCSI polymer coating including Nukote HT, Nukote ST, or Nukote CG. While Nukote AL can be used as a stand alone product, the industrial nature of most of NCSI's applications make its use as a topcoat more effective. Nukote AL has been used in a number of applications where an architectural finish is required.

COLORS

Standard medium gray. Custom colors, blended to match any RAL number, are available upon request.

PACKAGING

Nukote AL is available in 38 liter kits shipped in plastic pails, 400 liter drum sets shipped in metal drums.

COVERAGE

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

SURFACE PREPARATION

For optimum performance, the substrate should be hydro or sand blasted. Concrete substrates should be allowed to cure a minimum of 30 days. On concrete, Nukote AL should always be applied over a suitable primer for maximum adhesion. For some steel applications, a primer may not be necessary—please review your specific project with Nukote technicians. For all submersed applications, a primer is absolutely essential.

When used as a topcoat over other NCSI polyureas, if coated within the 6-hour recoat window, no inter-coat adhesion primer is required. However, if the recoat window is past, an inter-coat adhesion primer is required. NCSI recommends either Nukote Polyprime II or Nukote AU Prime II.

PHYSICAL PROPERTIES @ 24°C

Solids By Volume	100%
Volatile Organic Compounds	0 g/l
Theoretical Coverage @ 1000 Microns	1 m ² /L
Weight Per Liter in Kilograms	A:1.12 B:1.04
Viscosity (cps) @ 25 °C	A:525 to 575
Viscosity (cps) @ 25 °C	B:750 to 800
Shelf Life @ 10°C to 50°C	12 to 18
.....	Months
Tensile Strength @ 25°C ASTM D-412	>20
.....	N/mm ²
Elongation @ 25 °C ASTM D-412	300% to
.....	350%
Hardness (Shore D) ASTM D-2240	50 to 55
Flexibility 3mm mandrel ASTM D-1737	PASS
Tear Strength Die C ASTM D-624	>80 kN/m
Fire Rating UBC	Class 2
Flash Point Pensky-Martin	>93°C
Service Temperature Range-Dry	-20°C to
.....	120°C
Abrasion Resistance ASTM D-4060	<30 mg loss
Taber CS17 1000mg / 1000rev	

PROCESSING PROPERTIES @125 MICRONS 24°C/54% RH

Gel Time (Adjustable)	10 to 15 sec.
Tack Free Time (125 microns)	60 to 120 sec.
Post Cure Time	24 Hours
Volume Ratio (A:B)	1 to 1
Block Temperature	60°C to 70°C
Hose Temperatures (A and B)	60°C to 70°C
Constant Pressure	136 Bar

CLARIFICATION OF PROPERTY VALUES

The physical properties shown in the above table are defined in a range of values to allow for compliance when testing of sprayed films or laboratory draw down films. Results derived from independent testing will fall within the ranges shown if the testing performed complies with the standards utilized for each individual property shown. Results vary dependent on several factors, including: the equipment utilized, product mix ratios, application pressures, application temperatures, ambient temperatures, dry film thickness, age of the sample tested, etc. Results also vary dependent on the film type tested with laboratory draw down films deriving higher properties than sprayed films. Test results from films of at least 30-days in age will provide higher values than results from younger films as chemical cross-linking requires this time period to complete.

MIXING

Nukote AL must not be diluted under any circumstances. Use appropriate solvent for solvent purge line and flushing of equipment and if spraying stops for periods exceeding the pot life of the material. Thoroughly mix Nukote AL Part-B Base material with air driven power equipment until a homogeneous mixture and color is obtained.

APPLICATION

Nukote AL should be applied using a plural component, heated, high pressure 1:1 spray equipment.

Nukote AL may be applied at any ambient temperature. However, the equipment temperature is important. Both Part-A and Part-B materials should be sprayed at temperatures above 66°C. Adequate pressure and temperature should be maintained at all times.

After proper preparation, Nukote AL should be applied in a cross directional (North, South, East, and West) method. Recommended DFTs are a function of the project, please contact a Nukote technician. On horizontal surface applications, a texture "stipple" coat can be applied for non-skid purposes, after reaching the initial desired film thickness.

EQUIPMENT CLEAN UP

Cured product may be disposed of without restriction. The un-cured isocyanate and resin portions should be mixed together and disposed of in a normal manner. "drip-free" containers should be disposed of according to local environmental laws and ordinances.

STORAGE

Twelve to eighteen months in factory delivered, un-opened drums. 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 isocyanates and curative material.

This product is considered Dangerous Goods. DOT regulations classify it as:

Part-A: TOXIC LIQUID, organic, N.O.S. (Isophorone Diisocyanate), Class 6.1, UN 2810, PG III, TOXIC

CHEMICAL RESISTANCE

Each Nukote product formulation has varying levels of resistance to specific chemicals. Please review the chemical immersion 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.

Please read all information in the general guidelines, product data sheets, guide specifications and material safety data sheets (MSDS) before applying material. Published technical data and instructions are subject to change without notice. Contact your local NCSI representative or visit our website for current technical data and instructions.

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.

NCSI has a comprehensive training program for our qualified applicators and distributors. Please contact your local NCSI office or representative or visit our website for information on our training program or for current technical data and instructions.

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.

It is the user's responsibility to satisfy themselves by their own, independent tests, to determine suitability of the product for their own intended use, application and job situation. The user assumes all risk and liability resulting from his use of the product. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss or damage directly or indirectly resulting from use of, or inability to use, the product. Recommendations or statements, whether in writing or oral, other than those contained herein shall not be binding upon the manufacturer, unless in writing and signed by a NCSI corporate officer. Technical and application information is provided for the purpose of establishing a general profile of the material and proper application procedures.

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.