

DESCRIPTION

Nukote ST, is a high end standard polyurea and is designed for general purpose use, and developed to perform well for anti corrosion and waterproofing applications on steel, concrete, and many other substrates on demanding and extreme conditions. It is a two component, 100%-solids, pure-polyurea that significantly reduces the moisture problems that commonly cause pin holing and blistering in most polyurethane or polyurethane-hybrid systems.

Nukote ST is fast setting and can be applied at temperatures down to -30° C. This aromatic polyurea elastomer displays excellent chemical resistance, thermal stability and UV resistance. Nukote ST can be textured easily for anti-skid purposes and can be applied at thickness of 1mm to 3mm in multiple passes during single application.

FEATURES:

- 100 % solids with Zero VOC's
- Excellent elongation properties
- Resistance to solvents, acids and caustic
- Seamless, resilient and water proof.
- Excellent corrosion protection
- Low permeability
- Fast reactivity and cure time with no catalysts
- Applicable in temperatures from -30° C to 150° C
- Performs in constant temperatures from -30°C to 125° C
- Almost immediate return to service time

TYPICAL USES

- Marine Environment
- Walkways and Balconies
- Food processing plants
- Paper and pulp mills
- Cold storage facilities
- Landfill containment
- Secondary containment
- Structural steel
- Parking garage decks
- Water/waste water treatment
- Industrial and manufacturing facilities
- Power plants
- Airports
- Chemical plants
- Livestock facilities
- Food processing
- Warehouse flooring
- Warehouse

TECHNICAL DATA

(Physical properties-Typical Values)

Solids by Volume	: 100 %
Volatile Organic Compounds	: 0 gm / lit
Theoretical coverage 1mm	: 1 m ² / lit
Weight per liter	: A: 1.056
	: B: 1.052
Viscosity at 25° C in cps (ASTM D 412)	: A.260
	: B.380
Shelf life up to 50° C (months)	: 12 to 18
Tensile strength - ASTM D 412 C (Mpa)	: 18 to 23
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 to 80
Fire Rating	: Class 2
Flash point Pensky Martin	: >93°C
Service temperature (Dry)	: -30° C to 150° C
Abrasion Resistance ASTM D 4060 (Taber CS17 1000 mg/ 1000 Rev)	: <15 mg loss
Processing properties under standard lab conditions	
Mix Ratio V / V	: 1A: 1B
Gel time (adjustable) (seconds)	: 6 to 20
Tack free time (seconds)	: 30 to 45
Post cure time (hours)	: 24
Immersion (hours)	: 12
Block Temperature (°C)	: 70 to 75
Hose temperature (A & B) (°C)	: 70 to 75
Fluid Pressure (Bar)	: 140-150
Air Pressure (Bar)	: 7-7.5

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.

COLORS

Standard colors are grey and limited customized colors are available on request.

* Note: All aromatic polyurea are UV stable but not color stable. For the specific nature of the color choice reference is to be made with Nukote Technical service team.

PACKAGING

Pack Size 38 liters kits in plastic pails (19 lit A: 19lit B)
 380 liters metal drums (190 lit A: 00 lit B)

Side A and Side B are separately packed.

COVERAGE:

Nukote ST 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. While polyurea products are generally applied directly to the targeted surface-after suitable surface preparations- in some cases it is advisable as per the recommendations of the projects to be suitably primed before applying the polyurea. In such cases please refer to the NCS technical service team.

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 or contact NCSI surface preparation manual for more details

MIXING:

Nukote ST 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 ST part B resin material with air driven power equipment until a homogeneous mixture and color is obtained.

APPLICATION

This material must be applied using the high-pressure, heated plural component spray proportioning equipment, such as those manufactured by **GRACO®** or of equivalent specifications.

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 ST 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.

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.

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