
DESCRIPTION:

Nukote Hydroseal is a single component, liquid applied, high solids, bitumen modified, coal tar free, moisture cured polyurethane elastomeric waterproofing membrane. Hydroseal is available in three application versions for vertical (V) and horizontal (H) and water catalysing (WCH)- available only in horizontal. Hydroseal is suitable for application subject to hydrostatic pressure. Hydroseal cures to a seamless, resilient, flexible and durable membrane which can accommodate the normal expansion and contraction of structural elements. Hydroseal is in complete compliance with SCAQM air quality standards.

FEATURES:

- Meets ASTM C-836 requirements for liquid applied elastomeric waterproof membrane
- Seamless, resilient, flexible and durable
- User Friendly and Solvent Free
- Low odor
- Resistant to microbial attack and bacteria
- Low temperature crack resistance
- May be applied to green concrete

TYPICAL USES:

- Planters
- Between Slabs
- Tunnels
- Foundation Walls
- Bridges
- Roofing
- Basements
- Shower pans

COLORS:

Black

PACKAGING:

50-gallon (190-liter) drum

5-gallon (19-liter) pails

COVERAGE:

Nukote Hydroseal spread rate is 50 ft²/ gal at 30 mils (1.2 m²/liter) at 750 microns thickness without factoring any loss. It needs to be applied in two 30-mil coats.

STORAGE:

Twelve months in factory delivered, unopened drums. Store on pallets and keep away from extreme heat, freezing, and moisture. Always store between 60-95 °F (15-35 °C).

Opened and partially used material should be used within 2 days.

MIXING:

Hydroseal H / Hydroseal V: Before application, mix Nukote Hydroseal using a mechanical mixer (Jiffy Mixer) at slow speeds or mix for at least 5 minutes. Mix Nukote Hydroseal thoroughly until a homogeneous mixture and color is obtained. Use care not to allow the entrapment of air into the mixture. Always mix in a circular motion and avoid mixing in an “up and down” motion.

Hydroseal WCH: Before application, mix Nukote Hydroseal using a mechanical mixer (Jiffy Mixer) at slow speeds or mix for at least 5 minutes. Mix Nukote Hydroseal WCH with water (water must be added) at a ratio of one quart of water to 5 gallons of Hydroseal WCH. This will yield 5 ¼ gallons of membrane. The mixing ratio is 20 parts Nukote Hydroseal WCH to 1 part of water (20:1). Use care not to allow the entrapment of air into the mixture. Always mix in a circular motion and avoid mixing in an “up and down” motion.

Note: Nukote Hydroseal may be applied to green concrete. GC Additive must be added to Hydroseal at a ratio of ½ pint GC Additive to 5 gallons of Hydroseal. Thoroughly mix with a variable speed drill and mixing paddle at slow speed.

TECHNICAL DATA (All values @ 77 °F / 25 °C)	Horizontal	Vertical	WCH
Solids by volume (ASTM D2697)	90 ± 3%	90 ± 3%	94 ± 1%
Volatile organic compounds (ASTM D2369)	0.83 lb./gal 100 gm/liter	0.83lb./gal 100 gm/liter	< 0.5lb./gal < 60 gm/liter
Specific Gravity of materials ASTM D792	1.32	1.23	1.12
Shelf life @ 80 °F / 27 °C	12 months		
Viscosity 80 °F / 27 °C, cps	5000 ± 2000	40,000 ± 20,000	-
Tensile strength (ASTM D412-C)	350 ± 50 psi 3.45 ± 0.3 MPa	350 ± 50 psi 3.45 ± 0.3 MPa	500 ± 50 psi 2.1 ± 0.3 MPa
Elongation (ASTM D412-C)	300 ± 50 %		
Hardness (ASTM D2240)	50 ± 5 Shore A	50 ± 5 Shore A	50 ± 5 Shore A
Flexibility (2mm mandrel ASTM D522)	Pass	Pass	Pass
Service temperature	-25 °F to 200 °F -32 °C to 93 °C	-25 °F to 200 °F -32 °C to 93 °C	-
Water absorption -24 hours (ASTM D570)	~ 1 %	~1%	~1%
Crack Bridging @ -13 °F/-25 °C (ASTM C1305), 5 cycles	Pass	Pass	Pass
Tear strength (ASTM D624)	40 ± 20 pli 21 ± 3.5 kN/m	35 ± 10 pli 14 ± 2 kN/m	50 ± 5 pli 8.8 ± 0.9 kN/m
Impact Resistance (ASTM G14), No Holidays	> 200 in-lbf	> 200 in-lbf	> 200 in-lbf

Flash point Pensky Martin	>200 °F
PROCESSING PROPERTIES (Under standard lab conditions)	
Mix Ratio V/V	Single pack
Drying to recoat	H / V: 16 hours
	WCH: 4 hours
Maximum recoat time	48 hours
<i>Properties and values are highly dependent on equipment, spray gun, mix chamber temperature, pressure and related parameters. Variations are possible and expected.</i>	

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.

Prime all the joints, cracks & flashings with Nukote EP Prime II or Nukote Metal Prime II. Apply Nukote Hydroseal mixture over all joints, cracks & flashings. Bridge the joints, cracks & flashings with 4” fiberglass straight jacket tape or 3” polyester tape, pushing it into the sealant with trowel. Apply a thin coat of Nukote Hydroseal paste over the reinforced tape and smooth on to adjacent surface.

All cracks over 1/16” in width must be caulked with a polyurethane sealant or Premera PolyPatch / PolyBond repair mortar.

Note: Apply EP Prime per product data sheet in all applications where the Hydroseal membrane will be submerged in water.

APPLICATION:

Nukote Hydroseal may applied using brush, roller, squeegee, trowel or airless sprayer. Spread mixed Nukote Hydroseal and apply two coats at a rate of 30mils (750 microns) per coat. Allow coating to cure a minimum of 12-16 hours before proceeding to subsequent coats.

Conventional heavy duty airless spray equipment with a standard tip size (.033 to .053) -normally used to apply a high quality elastomeric asphaltic coating- can be used for application of Hydroseal. Check with your equipment supplier for the sprayer and tip sizes. Extra care should be taken not to cause air bubbles.

Apply Nukote Hydroseal evenly over the primed surface.

Nukote Hydroseal WCH can be applied at any thickness.

At 75°F (24 °C) and 50% relative humidity, allow each coat of Hydroseal V and Hydroseal H to cure (depending on environmental conditions and temperature) 12-16 hours minimum before proceeding to subsequent coat. If more than 48 hours passes between coats, re-prime the surface with recommended NCSI primer before proceeding.

At 75°F (24 °C) and 50% relative humidity, allow each coat of Hydroseal WCH and Hydroseal H to cure (depending on environmental conditions and temperature) 2-4 hours minimum before proceeding to subsequent coat. If more than 48 hours passes between coats, re-prime the surface with recommended NCSI primer before proceeding.

Nukote Hydroseal is very sensitive to heat and moisture. Higher temperatures and/or high humidity will accelerate the cure time. Low temperature and/or low humidity extend the cure time.

Use caution in batch sizes and thickness of application. Limit single coat thickness to 30-40 mills wet.

Protect membrane as soon as possible after completion of successful water test or visual inspection and/or repairs, with approved protection board or geotextile drainage composite. All horizontal and vertical membrane must be protected to prevent damages from back fill or other impacts.

EQUIPMENT CLEAN UP:

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

LIMITATIONS:

Do not open until ready to use, and store in a sealed container after opening.

Should be used only as a base membrane.

Surface may be slippery when wet.

Regarding coating of asphalt surfaces, please contact NCSI technical department.

Clear coating may turn opaque and cloudy due to moisture penetration, especially in exterior applications.

Containers that have been opened must be used as soon as possible.

Do not dilute under any circumstance not designed to withstand direct wear.

WARNING:

This product contains Aromatic Hydrocarbons, Isocyanate and solvent.

WARRANTIES AND DISCLAIMERS:

Nukote Coating Systems International, a Nevada, USA Corporation warrants that 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.