HYDROWIC

TECHNICAL DATA SHEET

Issue Date Dec-12-2017 **Revision Date Feb**-13-2018 **Version 2**

1. IDENTIFICATION

Product Name: HydroWic

Product Description: Two Component Novel Siloxane (VOC COMPLIANT)
HydroWic is an engineered siloxane. It has unique vapor permeability yet is waterproof. The coating has excellent resistance to chemicals, abrasion, and UV light. HydroWic is a high solid, low VOC coating. It can be used as a replacement for most other sealers. It may also be used as a primer for many other coatings. Because HydroWic has excellent vapor permeability, it can be applied to damp surfaces such as newly set concrete. It almost eliminates surface evaporation during concrete curing. This leads to a reduction in cracking and increased strengths of cured products. It has excellent properties that give increased color enhancement to both wood and cementitious materials. HydroWic can be applied to both porous and nonporous surfaces. HydroWic can be tinted to create staining effects or solid color.

Recommended Use: Protective and decorative coating for use on concrete, wood, or metal. Primer/Sealer

How to Apply Hydro Wic Application Video Link: https://www.elastocrete.com/video/apply-hydro-wic/
How to Burnish Hydro Wic to a Satin: https://www.elastocrete.com/video/how-to-burnish-hydro-wic-to-a-satin/

2. Product information at 20° C (68° F)

Components:	Two
Mass Density:	8.8 lbs./ US gal
Percent Solids:	96+or – 3%
VOC content (as supplied):	12 g/liter
Temperature resistance:	>260° C (500° F)
Recommended dry film thickness:	1-3 mils per coat
Theoretical coverage rate:	2 mils thickness = 790 ft^2

Cure times

Dry to touch:	6-8 hours
Dry to walk:	12 hours light foot traffic heavy traffic 48 hrs.
Recoat:	24 hours
Dry to polish:	48 hrs.- unlimited

Gloss level:	Gloss. Coating can be polished to lower sheens with the addition of aluminum oxide.
Color:	Clear as supplied, can be tinted to full range of colors
Pot life:	>2 hrs. when thinned 10-20% with Butyl Cellosolve and or acetone
Shelf life:	12 months

Mixing instructions:

Combine part A and Part B at 1:1 ratio either by weight or by volume. Thin unless using as a grout.

Mix components with a low speed mechanical mixer for approximately 2 minutes.

- Thinning is required for an approximate 2-hour pot life
- Recommended thinning is 5-20% with acetone and/or Butyl Cellosolve
- When thinning, combine thinner before mixing.
- Not thinning will result in a 20-minute pot life.
- More thinning can result in better penetration into the substrate, resulting in greater color enhancement.
- A test area of substrate can be done to know proper thinning.
- When coating porous materials, such as concrete, too much thinning can result in the coating penetrating into the substrate and losing gloss in areas. A second coat can correct this.
- When coating over previously coated substrates, such as stamped concrete, a test area should be coated. If the existing coating is thin enough the HydroWic can penetrate through the existing coating and renew the look of the old coating.
- A determination must be made on whether to remove the existing coating.

- When coating over concretes that have been previously sealed with acrylics, it has been our experience that thinning 20% works well and yields coverage rates between 1200-1600 ft^2/gallon.
- Thinning with butyl Cellosolve will result in lower odor, however will contribute to VOC concentration in coating. Thinning 10% with Cellosolve will equal a coating with approximately 100 g/liter VOC content.
- Acetone can be used where VOC regulations require lower VOC content. The use of acetone will not change VOC coating concentrations (VOC exempt solvent).
- Aluminum oxide can be added to increase durability and hardness.
- It also makes the coating polishable.
- It is not necessary to add aluminum oxide to the first coat if doing multiple coats.
- When adding aluminum oxide, add 10-20% of coating weight (240-400 grit)
- Anti-slip can be added
- When tinting as a topical stain use 0-4% tint to coating weight (solvent base tint)

HydroWic use as a grout

- HydroWic can be used as a clear grout on ElastoCrete or other concrete or porous products (we do this primarily on countertops or similar applications).
- We recommend priming the surface first with HydroWic that has been thinned with 20% solvent by weight.
- Next, mix HydroWic with NO thinning.
- Apply the clear grout on the coated surface using ElastoCrete Grout pads, immediately while prime coat is wet for best results. You may also wait until prime coat has cured first.
- For best results, remove excess grout with razor blade scraper for best results, pulling tight across grouted surface.

3. Application instructions

Coating application:

Use carbon filter respirator when coating and have proper ventilation.

Conventional spray, airless spray, brush, or roller.

Non-shedding rollers work best.

Higher nap rollers work best on stamped concretes (3/4”).

High density foam rollers work well and have no shedding when compared with nap rollers.

- HydroWic is designed as a topical thin film coating. It is not necessary to have high build.
- Color enhancement will not fade as solvents evaporate, as with most concrete coatings. HydroWic will darken the surface for about 10 minutes before it reaches its permanent color enhancement.
- Apply coating at 1-3 mils wet film thickness per coat (thinned 5-20%). The material has good working time to allow for thorough coverage of a substrate.
- Material will not cobweb as with many concrete sealers.
- When applying the coating, first roll the surface aggressively to cover all areas. Next, back roll to remove any material that has been left as roller lines. The surface will appear to have small bubbles. These bubbles will pop and disappear as the coating starts to cure.

HydroWic Exterior

When using HydroWic on exterior applications, the best application time would be when the surface is getting cooler rather than warmer. If the substrate is heating up during cure, the gases will expand and begin to leave the substrate causing small blisters in the coating. If this happens, you can remedy these blisters by using spiked cleats to walk on the wet surface. Then, back roll over the surface until the coating transitions from wet to tack. Once the coating is at a tack stage it will not blister. The time to tack is determined by humidity and temperature. At 20^{O} C (68^{O} F), the tack time is usually about 2 hours. Higher humidity and temperature will result in faster cure times.

HydroWic over Damp Surfaces

HydroWic is very unique, in that it can be applied to damp surfaces. This includes freshly poured/placed concrete. When coating green concrete, it is best to apply HydroWic as soon as the concrete has set and can be walked on. This will eliminate most surface evaporation, allowing the concrete to cure more thoroughly. It will also deepen the color of the cured concrete, and greatly reduce the amount of efflorescence. By virtually eliminating surface evaporation, this stops the constant flow of water to the concrete surface that carries with it the salts that cause efflorescence. It also allows the chemical reactions that are occurring to continue much more efficiently, resulting in denser, stronger, and better cured concrete.

HydroWic can be applied soon after pressure washing or cleaning. The coating can be applied once all standing water is removed from the surface in the same day. Most coatings do not allow water vapor to pass through and require low concrete relative humidity. HydroWic allows water vapor to pass through readily. This greatly reduces the risk of vapor pressure building under the coating. This means that substrate relative humidity becomes irrelevant. It also means that failure of the coating, due to water vapor, is greatly reduced.

HydroWic- Polished

HydroWic is polishable. If you wish to polish the HydroWic coating, you must use aluminum oxide in the mix. Aluminum oxide size 240-400 grit works best, with a loading of 10-20% to coating weight. Once the surface has cured for a minimum of 48 hours at standard room temperature, the coating can be polished. Polishing is done using an 800-grit wet/dry white resin diamond pad. This is done either wet or dry on a low speed polisher. The advantages of wet polishing include: faster polishing and less diamond wear. The advantage of dry polishing is less mess. Next the surface is polished with a diamond impregnated pad. Different grit diamond pads will give different sheens. Lower sheen is achieved with 400 grit, medium with 800 grit and gloss with 1500 or 3000 grit pads. The coating will continue to harden for 30 days. The longer the coating cures, polishing becomes more consistent, but takes longer.

Coating example 1 (polishable top coat)

100 g of Part A

100 g of Part B

20 g of Butyl Cellosolve (this is a 10% loading)

40 g of 400 grit Aluminum oxide (this is a 20%loading)

Coating components are combined and mixed with a low speed mechanical mixer for 2 mins.

This is a great mix for a top coat that can be polished.

Coating example 2 (recoat stamped concrete)

100 g of Part A

100 g of Part B

40 g of Acetone (this is a 20% loading)

Coating components are combined and mixed with a low speed mechanical mixer for 2 mins.

This is a great mix for the recoating of previously coated stamped concrete or doing a second coat.

Coating example 3 (coating stamped concrete)

100 g of Part A

100 g of Part B

20 g of Butyl Cellosolve (this is a 10% solvent loading)

Coating components are combined and mixed with a low speed mechanical mixer for 2 mins.

This is good for a single coat on never before coated stamped concrete.