



PRODUCT TECHNICAL DATA SHEET

NOVOLAC COAT

Advanced Coating Systems

NOVOLAC TWO-COMPONENT RESINOUS OVERLAYMENT

GENERAL PRODUCT DESCRIPTION

Novolac Coat is an advanced high performance novolac, two-component overlayment and coating system. It was formulated to have very high chemical resistance and with enough working time. Novolac is generally applied between 1/16" and 3/8" with silica. Novolac is the product of choice for jobs with the harshest chemical conditions. Refer to the ONYX Chemical Resistant Chart for further information.

ADVANTAGES

- Longer Working Time
- Self-Priming
- Resin Rich - Nonporous
- 100% Solids, V.o.c. = 0 G/L
- Seamless Flooring System
- Essentially Odorless
- 4 Times Harder Than Standard Concrete
- Withstands Heavy Forklift Traffic
- Chemical And Solvent Resistant
- Can Be Applied Over 10 Day Old Concrete

PRODUCT DATA

Volumetric Ratio:	5 To 1
Solids:	100%
Application Temperature:	65-90°F And 5° Above The Dew Pt.
Thinning:	Not Required
Pot Life:	15-30 Minutes
Working Time On Floor:	20-40 Minutes
Cure Time:	8-9 Hours (Walking) 24 Hours (Light To Med Traffic) 48 Hours (Heavy Traffic)
Critical Recoat Time:	24 Hours
Shelf Life:	12 Months
Usda Food And Beverage:	Meets Requirements

Cure time, pot life, and working time are based on a slab temperature of 70-75 F°, and will change accordingly as temperature changes.

COLOR SELECTION

Note: Darker colors are recommended when using Novolac resins as they are more prone to yellowing than standard epoxy systems. ONYX standard colors are: Clear, black, white, light gray, medium gray, dark gray, light beige, dark beige, sand beige, safety red, tile red, pastel blue, light brown, and safety yellow. Other colors are available at an additional charge.

APPLICATIONS

- Chemical Processing
- Chemical Storage
- Clarifiers / Sumps
- Hazardous Waste Stage
- Waste Water Treatment
- Chemical Storage
- Plating
- Lines
- Equipment Pads
- Secondary Containment
- Trench and sumps
- Battery charging Areas

PHYSICAL PROPERTIES

PROPERTY	VALUE	REFERENCE
Compressive Strength	28,200 psi	ASTM C 579
Flexural Strength	13,300 psi	ASTM D 790
Tensile Strength	8,370 psi	ASTM D 307
Bond to Concrete	350 psi	ASTM D 4541
	Concrete fails at this point	
Taber Abrasion	Loss/1000 Cycles = 113 mg	ASTM D 4060 CS 17 Wheels
Water Absorption	.10% maximum	ASTM D 413
Linear Shrinkage	.01% maximum	ASTM C 531
Flammability	Self-extinguishing	ASTM D 635
Impact Resistance	16 ft. lb. - no failure	Mil-D-3134H
Coefficient of Friction	.6 minimum	ASTM D 2047
Hardness, Shore D	85	ASTM D 2240
Porosity on unglazed finish	.00	NACE Stand TM-01-74

CHEMICAL RESISTANCE

Acetic Acid	NR	Hydrochloric Acid 37%	R
Alcohol, Ethyl	NR	Nitric Acid 30%	SS
Alcohol, Isopropyl	SS	Phosphoric Acid	SS
Aluminum Hydroxide	R	Skydrol R	R
Citric Acid	R	Sodium Bisulfate	R
Copper Chloride	R	Sodium Chloride	R
Diesel	R	Sodium Hydroxide 50%	R
Ferric Acid	R	Sulfuric Acid 98%	R

Note: The above guide is based on 7 days exposure of the listed chemical at 72 degrees F (22 degrees C)

Key: R = Recommended, SS = Splash and Spill, NR = Not Recommended. Above chart serves as a guideline only. Samples will be furnished upon request for testing.

PRODUCT LIMITATIONS

Always read ONYX PRODUCT LIMITATION GUIDELINES document prior to installation as the content below is only partial information.

Refer to the ONYX Chemical Resistance Chart regarding the capacity for chemical resistance. As chemicals/acids spill on the ground, they begin to evaporate and the concentration increases. As the concentration increases, the chemical resistance of the coating decreases; at which point, the coating may no longer be able to handle the chemicals. A maintenance/cleaning procedure is therefore recommended as needed.

The durability and impact resistance is in direct proportion to the thickness of the product. Abuse that may damage a 1/16" thick coating, but not a 1/4" thick coating increases the likelihood of a failure. Impact breaks the bond, thereby creating a hole/crack, which then becomes a weak point for the chemicals to bypass the Novolac coating and contaminate the concrete. Therefore, the proper thickness to withstand abuse must be applied for Novolac Coat to perform at its highest level.

Novolac is not intended to be a waterproofing system, and should not be installed in continuous immersion without a waterproof membrane underneath it.

Novolac Coat is not a thermal shock resistant coating. If the Novolac is applied in areas with hot temperatures from water, grease, etc. the thermal shock may cause cracks; at which point, the chemicals will penetrate the cracks and contaminate the concrete. Apply ONYX Crete SL under the Novolac Coat to achieve the thermal shock on the bottom, with the chemical resistance on top.

COVERAGE

Standard nominal floor thicknesses are: 45-50 mil, 1/8", 3/16" and 1/4". Use chart below for determining required gallons.

Thickness:	Gallons in 1 Sq Ft	Gallon in 100 Sq Ft
45-50 Mils	.01	1
1/8"	.0286	2.86
3/16"	.0429	4.29
1/4"	.0572	5.72

Note: The above guidelines are for an unglazed (full broadcast) anti-slip surface. A standard glaze coat over an unglazed (30-40 mesh silica) surface requires 100 Sq Ft to the gallon (or .01 gallon per Sq Ft).

SURFACE PREPARATION

Before the coating is applied, the concrete must be:

- Clean – Contaminants removed
- Profiled – Surface mechanically prepared
- Sound – Cracks repaired

Mechanical methods are required for preparing concrete prior to coating application. Shot-blasting, diamond grinding, scarifying, and scabbling are all acceptable methods. The concrete profile should be approximately a CSP 4 or higher 60-80 grit sandpaper after preparation.

MIXING

Ratio of Novolac Coat is 5 to 1. That is, 5 parts of A (resin), to 1 part of B (hardener). Mix the following with a drill and jiffy mixer.

- Pre-mix the Part A for 45-60 seconds until uniform. Pour 5 quarts of Part A into a clean 5 gallon bucket.
- Add 1 quart of part B and mix for another 2 minutes.

VERTICAL MIX

Novolac Coat can be made into a vertical mix by the following: Mix 5 quarts of Novolac Coat Part A and 1 quart Part B per above instructions. Slowly add 1.5 Gallons of fumed silica (Konasil 200, Cabosil M5) into mix. Next, add in 1.75 gallons of 30-40 mesh silica. Adjust per temperature conditions. Prime with neat Novolac Coat first.

Information expressed in this data sheet is correct to the best of our knowledge. The technical data sheet does not constitute a warranty, expressed or implied as to the performance of this product. The use and application of this product is beyond our control. Warranty and liability therefore is limited to the replacement only for defective materials. Technical information is subjected to change without cause nor notice. Consult the ONYX website to confirm this is the most current issue date of the data sheet as information is subject to change.

APPLICATION PROCESS - BROADCAST COAT

The best method for controlling thickness during application is to map out the area first. After determining the layout and square footage of the area, calculate the required gallons of Novolac Coat (refer to above coverage chart). Next, mark off on the floor how many gallons of resin are to be used by the time predetermined points have been reached.

- Pour mixed Novolac Coat onto concrete in a ribbon.
- Use a squeegee or trowel to spread resin evenly within the coverage rate for desired thickness.
- Use a 3/8" nap paint roller with a phenolic core on an extended poll. Then lightly backroll resin, removing any unevenness left by the squeegee or trowel. This generally requires the use of spike shoes, allowing one to walk in wet resin mix.
- Wait 3-10 minutes (depending on the weather) while resin mix self-levels and an even resin surface appears.
- Wearing spiked shoes, broadcast silica aggregate into the coating. When broadcasting, disperse the sand, throwing upward and covering as much square footage as possible. Do not throw silica sand directly at the resin as it will cause an uneven finish. This generally requires the use of spiked shoes, allowing one to walk into the wet resin mix. Broadcast in multiple passes to ensure better quality. Keep a minimum of two foot wet edge, and do not broadcast into it until after the next batch is applied to avoid a ridge on the final finish. It is not recommended to install the coating more than 1/8" on a single pass. A double broadcast is recommended for 3/16" or more. A double broadcast will help cover imperfections in the slab.
- Excess silica can be swept up after 6-8 hours. The floor cannot be sanded for 24 hours.

If installing Novolac Coat over dampened concrete, use the Epoxy WB Fast as a waterbased primer prior to application

APPLICATION PROCESS - TOP COAT

- Novolac Coat may be used as a glaze coat.
- Mix Novolac Coat resin without silica using above mixing instructions.
- Immediately pour out onto the unglazed surface in a ribbon, walking and pouring at the same time until the bucket is empty. Apply at approximately 80-100 Sq Ft per gallon, depending on the grit size of silica used and the desired textured surface.
- Using a 3/8" non-shedding phenolic (plastic) core paint roller, roll coating forwards and backwards.
- Lastly, backroll in the direction perpendicular from step 4.

PACKAGING

Novolac Fast is available in 2 different kit sizes:

	Part A	Part B
3 Gallon Kit	2.5 gal.	0.5 gal.
6 Gallon Kit	5 gal.	1 gal.

CLEANUP

Novolac Coat while in a liquid state may be cleaned up with water and degreaser. Otherwise a strong solvent may be required while Novolac Coat is setting up.

WARRANTY

ONYX products are warranted for 1 year after date of manufacturer. Please refer to the ONYX Limited Material Warranty for additional clarification.

SAFETY

Consult Novolac Coat safety data sheet. Avoid Novolac Coat contact with eyes and skin. Some individuals may be allergic to epoxy. Always wear protective eyewear, clothing, and gloves. Safety always comes first.

MAINTENANCE

Refer to the ONYX Maintenance and Cleaning Guidelines.