USA COIL & AIR

What We Offer

# COIL COATING OVERVIEW

FinKote2
FinKoteZx
FinKoteRx

S.L. COOKE
Company Inc.
Since 1936

FinKOTE2
Premium Solution for Corrosion Protection

# COIL COATING

FinKote2 is the premium coating system for the HVAC industry. Years of ineffectual coatings in the HVAC market prompted the development of FinKote as a way to address those shortcomings. Finkote is a high edge build e-coating system that effectively coats both microchannel and tube and fin coils in AC units. Aluminum, copper, and steel coils can now be protected from corrosion, particularly in cases of high UV exposure, coastal installations, and offshore projects — anywhere with a highly abrasive environment that will cause premature wear on coils. FinKote2 is the most advanced currently available e-coat system in the HVAC industry.

FinKote2 now includes a standard 6 Year Warranty!

## PRETREATMENT

Parts are cleaned and pretreated with a conversion coating to prepare the part for electro-coating. This process guarentees a perfect final coat that is able to withstand corrosive environments where conventional coils would break down and fail.

## ELECTRO-COAT

Direct current is applied between the parts and an electrode. Paint is attracted by the electric field to the part where the current is deposited. This process allows for a durable and longer lasting bond that is optimal for areas that are unable to be painted conventionally.

## RECOVERY

Every coil and all its parts are rinsed to reclaim deposited paint solids, ensuring a perfect coating with no leftover residue or product waist. Any debris or foreign material could effect performance and result in possible system failure. Perfection and complete customer satisfaction is our number one priority.

## CURE

Paint is thermally cross-linked and cured to the surface. Our curing process allows for a total dry and hardened exterior in a short period of time. With the heat application and curing process you can rest assured that your coating will provide adequate protection and increase longevity.

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# COIL COATING

FinKOTE2
Premium Solution for Corrosion Protection

## FinKOTE2 PERFORMANCE TESTING

| TEST | SPECIFICATION | RESULTS |
|---|---|---|
| SWAAT run to fail | ASTM G85 A3 | 289 Days (6936 hrs) |
| 30 Day SWAAT + Adhesion | ASTM G85 A3, ASTM D3359 | Pass, 4B |
| 2400 hr Cyclic corrosion + Burst | ASTM G85 A2 | Pass, 2100 psi |
| Water resistance | ASTM D870-09 | Pass, 260 hrs, no flaking or chipping |
| Chipping resistance | ASTM D3170 | Pass, 7A |
| Steam resistance | ASTM D714 | Pass, 48 hr, #6 or better |
| Humidity resistance | ASTM D2247 | Pass, 600 hrs, no blistering or gloss loss |
| UV & QUV resistance | ASTM G53-88, D4587, D523 | 1000 hrs, no loss |
| Chemical resistance | | 48 hr immersion resistant to over 200+ chemicals |
| Heat transfer | | <3% |
| Thickenss | ASTM 376 | .8 - 1.2 mil (E-COAT) 1.8 - 4 mil (total) |
| Flexibility | ATSM D4145, ATSM 522 | 2T, 5/8" mandrel |
| Impact resistance | ASTM D2794-93 | 120 in. lbs, no cracking or chipping |
| Adhesion | ASTM 3359 | 5B |

# COIL COATING
## Anti-Microbial

FinKOTE Rx
Advanced Anti-Microbial Protection

Dramatically Reduces the Growth of Germs On Surface • 99% Effective Against Mold, Mildew, E Coli, H1N1 and MRSA • Permanently Bonded To The Surface • Destroys Microorganisms by Attacking the Cell Membrane

### Spectrum Microbial Control:

Fungi, Mold, Mildew, Germs, Gram (+) and Gram (-) Bacteria, Yeast, and Algae.

## INFINITE LIFE

The film cannot be removed by moving air, water/detergents, or physical touch. The longer polymer chains will kill microbes on contact as long as the microbes can come in contact with the treated surface.

## DURABILITY

As an organic functional silane, this chemistry has the ability to react with surfaces and with itself in ways that allow for durability consistent with the durability of the substrate that is being treated. The bound monomers react with each other to form a cross-linked polymer of extremely high molecular weight, thereby producing an essentially permanent antimicrobial surface.

## BROAD APPLICATIONS

The product provides the chemical stability needed for compatibility with all kinds of substrates and typical manufacturing processes while being able to survive the use and abuse of commercial and consumer applications.

## HOW IT BONDS

1. Ion Exchange - Very rapid cationic coating is developed one molecule deep. This is an ion exchange process by which the cation of the silane compound replaces protons from water on the surface.
2. Polymer Cross-Linking - 2 ways - The silane compounds have silicon functionality enabling them to polymerize, after they have coated the surface, to become almost irremovable even on surfaces with which they cannot react, covalent bonding to that surface will also occur and it is also possible to have intermolecular polymerization.

## STANDARD 1 YEAR WARRANTY

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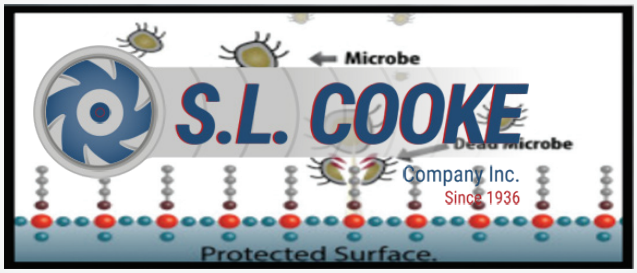
# COIL COATING
## Advanced Anti-Microbial

FinKOTE Rx
Advanced Anti-Microbial Protection

## PARTIAL LIST OF PATHOGENS DESTROYED OR INACTIVATED




### Gram Positive Bacteria

Bacillus sp. (vegative cell)
Bacillus subtilis
Clostridium difficule
Corynebacterium diptheriae
Enterococcus sp. (incl. VRE)
Listeria
Micrococcus sp.
Mycobacterium tuberculosis
Mycobacterium smegmatis
Propionibacterium acnes
Staphylococcus aureus
Staphylococcus aureus (MRSA)
Staphylococcus epidermis
Streptococcus faecalis
Streptococcus mutans
Streptococcus pneumonia
Streptococcus pyogenes

### Viruses

Adenovirus Type II & IV
Bovine Adenovirus Type I & IV
Feline pneumonitis
Herpes simplex Type I
Herpes simplex Type II
HIV-1
Influenza A2 (Aichi)
Influenza A2 (Asian)
Influenza B
Mumps
Norovirus
Parainfluenza (Sendai)
Rous sarcoma
Reovirus Type I
Simian Virus 40
Vaccinia
MS2
PRD1

### Gram Negative Bacteria

Actinetobacter aerogenes
Actinetobacter calcoaceticus
Aerobacter aerogenes
Aeromonas hydrophilia
Citrobacter deversus
Citrobacter freundi
Enterobacte aerogenes
Enterbacter aglomerans
Enterobacter cloacae
Enterococcus sp. coli
Klebsiella oxytoca
Klebsiella pheumoniae
Klebsiella pneumophila
Legionella morganii
Mycobacterium tuberculosis
Proteus Mirabilis
Vulgaris Proteus
Pseudomonas aeruginosa
Pseudomonas fluorscens
Psuedomonas pulida
Salmonella cholera suis
Salmonella typhimunium
Salmonella typhosa
Serratia liquifaciens
Serratia marcescens
Treponema hyodysenteriae
Xanthomonas campestris

### Fungi, Algae, Mold, Yeast, Spores

Alterania alternate
Aphanizonmenon sp.
Aspergillus flares
Aspergillus niger
Aspergillus sydowi
Aspergillus terreus
Aspergillus versicolor
Aspergillus verrucari
Anabaena cylindrica
Aureobasidium pullans
Candida albicans
Candida pseudotropocalis
Cephaldascus fragans
Chaetomium globsum
Chlorophyta protococcus
Chlorophyta selenastrum
Chlorophyta sp.
Chrysophta sp.
Chrysophta sp.
Chlorella vulgaris
Cladopsorium cladosporioides
Cyanophyta anabaena
Cyanophyta oscillatoria
Cyanophyta (blue-green) sp.
Dreschslera australiensis
Epidermophytan sp.
Gliomastix cerealis Escherichia
Gloephyllum trabeum
Gonium sp.
Microsporium sp.
Microsporium audouinii
Monilia grisea
Oscillatoria sp.
Penicillium chrysogenum
Penicillium commune
Penicillium funiculosum
Penicillium pinophillium
Penicillium variable
Phoma fimeti
Pithomyces chartarum
Poria placenta
Pullularia pullans
Scenedesmus
Saccharonyces cerevisiac
Scolecobasidium humicola
Selenastrum gracile
Selenastrum sp.
Trichoderma viride
Trichophyton interdigital
Trichophyton maidson
Trichophyton mentagrophytes
Trichophyton sp.

FinKOTE Zx
Extreme Environment Coating Systems

# COIL COATING

## Extreme Enviroment Coating

FinkoteZx, a multi-layered coating process designed to withstand the worlds most challenging applications. Food processing plants, waste water treatment facilities, airports and refineries are locations where extreme chemical attack occurs. FinkoteZx custom formulates a coating package designed to meet the chemical resistance requirements of the location. NSF-51 Certified and FDA compliant top coats available.

## OUR COATING

Advanced Zirconium Oxide Pretreatment • Electro-deposit Epoxy Base Primer - NSF51 Certified • Cross-linked Top Coat - FDA Compliant • Extreme chemical resistance • Acid Resistant, Chlorides, Sanitzers, H2S

## PERFORMANCE TESTING

- Corrosion: ASTM G85-A3 6900+
- Adhesion: ASTM D3359 5B
- NSF - 51 Certified

## PROPERTIES

- EC-6100 Cathodic base primer
- Proprietary Chemical Resistant Top coats
- DFT - 1.5 - 2.8 ml
- Max temp - 550 F Continuous

## APPLICATIONS

Food Processing Plants, Waste Water Treatment Facilities, Airports, Refineries/ Chemical Processing, Offshore Platforms, Mining

## STANDARD 1 YEAR WARRANTY

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# COIL COATING
## Extreme Enviroment Systems

FinKOTE Zx
Extreme Environment Coating Systems

| FinKOTE Zx EXTREME ENVIRONMENT COATING SYSTEMS | | |
|---|---|---|
| FinKoteZx IS RESISTANT TO THE FOLLOWING CHEMICALS | | |
| Acetone | Fluorides | Ozone |
| Acetic Acid | Formic Acid | Peracetic Acid 0.08% |
| Acetates | Fructose | Perchloric Acid |
| Amines | Gasoline | Phosphoric Acid |
| Ammonia | Glucose | Potassium Chloride |
| Ammonium Hydroxide | Glycol | Potassium Hydroxide |
| Amino Acids | Glycol Ether | Propyl Alcohol |
| Bleach | Hydrochloric Acid | Salicylic Acid |
| Butyl Alcohol | Hydrogen Peroxide | Salt Water |
| Calcium Chloride | Hydrogen Sulfide | Sodium Chloride |
| Carbonic Acid | Iodine | Sodium Hypochlorite 5% |
| Chlorides | Isobutyl Alcohol | Sodium Hydroxide <10% |
| Chlorine Gas | Isopropyl Alcohol | Sodium Sulfate |
| Chromic Acid | Kerosene | Sucrose |
| Citric Acid | Lactic Acid | Sulfuric Acid 25-28% |
| Creosol | Methol | Sulfates |
| Diesel Fuel | Methanol | Starch |
| Ethyl Acetate | Methylene Chloride | Tolulene |
| Ethyl Alcohol | MEK | Xylene |
| Ethyl Ether | Methyl Isobutyl Ketone | Additional Testing Available |

# COIL COATING
## Finkote 2 Cleaning

This document provides guidelines for general and routine maintenance in accordance with FinKote2 warranty requirements. All manufacturers' directions for maintaining your system should be followed. This guideline provides the required cleaning intervals and steps to validate the FinKote2 warranty.

## FREQUENCY

All coils must receive quarterly maintenance procedures outlined below to maintain your FinKote2 warranty as stated in the Terms and Conditions.

## SAFETY

Safety procedures should be followed at all times. This includes, but not limited to, electrical power, protective clothing and proper tools to complete the task.

## SHUT OFF POWER

Follow lock out / tag out procedures to ensure the unit is powered down prior to any cleaning procedures.

## CLEANING STEPS

1. All cleaning must be done in the direction of the fin stock to reduce fin damage.
2. Chlor*Rid DTS must be properly flushed from the coil.
3. Be Gentle
4. Any pressurized cleaning systems can cause damage to the fins if you are too aggressive. Keep pressure nozzle at a 8"-16" distance from the coil with a 40º angular tip to prevent folding the fins over. Recommended maximum pressure should be 900 psi. Test a small section along the edge to establish distance and direction.
5. Bleach, household cleaners and contaminated water are not approved for cleaning and will reduce service life and void warranties.

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# COIL COATING
## Finkote 2 Cleaning

## CHEMICALS TO USE

Use Chlor*Rid DTS for the removal of chlorides, sulfates, nitrates and soluble salts.

## SURFACE PREP

Coils may exhibit a build-up of dirt, grass, ragweed and many other airborne contaminants. Avoid pushing or driving materials deeper into the coil while cleaning. Use a soft bristle brush and/or a shop vac to remove as much debris as possible from the surface of the coil. If necessary, wash the face of the coil using a pressure washer with a maximum pressure of 900 psi at the spray tip. This should be done at a distance of 8"–16" and in the direction of the fin stock.

## SOLUBLE SALT REMOVAL

Chlor*Rid DTS may be applied using a low pressure pump-up sprayer and does not require dilution before being applied to a FinKote2 coil. It is necessary to wet the entire surface of the coil starting at the bottom and working to the top. After the surface has been thoroughly wetted and 5 minutes has elapsed, the salts
will have been solubilized and rinsing will be required. Thoroughly rinse the coil from the front and back side using a pressure washer at less then 900 psi. Depending on the severity of the contamination, it may be required to repeat the salt removal process

## DOCUMENTATION

1. Record date of installation
2. Record quarterly cleaning methods and service provider
3. Contact your FinKote2 representative if you have any questions or if you need assistance.

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# OUR STORY

USA Coil & Air is one of the largest and oldest replacement coil companies in our industry. Over the years, we have developed other great lines of HVAC equipment to include direct drive and belt drive fan coil units, central station units with emphasis on the replacement market as well as fluid coolers, remote air-cooled condensers and tube bundles. Every one of our lines is specific to the quick shipment and requirements of the replacement market. You will find that we make this process simple and easy. We have expedited schedules for all our equipment and know how to deal with existing facilities and the problems related to shipment and delivery. We also pride ourselves with great application engineering so that you don't replace equipment without having a true understanding of why the original might have failed and what can be provided in the replacement to increase longevity.

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