ELIMINATING CORROSION, ONE JOB AT A TIME

SURFSIL

www.surfsil.com

SURFSIL

Choosing the Right Solution for the Job

Choosing the most appropriate coil coating for the application could save the project thousands of dollars and eliminate repeat treatments. Choosing the wrong coil coating could reduce heat transfer properties and lead to higher energy bills, premature failure, and unnecessary costs.

Description of Solution

SURFSIL is a hybrid compound using the latest nano-silane technology to incorporate organic and inorganic properties allowing the coating to chemically adhere to the substrate (ig metal) via a covalent bond. This technology has allowed us to design a solution tailored specifically for the HVAC/R industry and has proven its performance, showing NO SIGN OF CORROSION after 10,008 hours of testing following the ASTM B-117 Salt Spray (Fog) Standard.

Durability

- Chemically bonded - does not allow corrosion to grow under the coating
- Flexible and scratch resistant - it will not crack or peel off
- Resistant to chemicals found in HVAC/R environments

Energy Savings

- Thin DFT (dry film thickness) – no bridging & will not insulate unit
- Preserves original equipment efficiency throughout its life time
- Improves heat transfer by filling microcavities

Improves Indoor Air Quality

- Hydrophobic surface – inhibits mold and bacteria growth
- Seals HVAC/R components from the environment

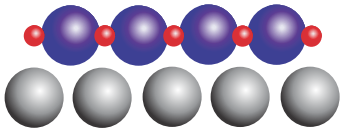
Reduce Equipment Replacement Costs

- Extends the useful life of HVAC/R equipment
- No harsh chemicals required for maintenance
- 5 year standard warranty with an option for a 10 year extended warranty

How it Works

PROBLEM

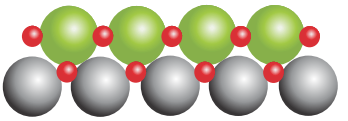
Mechanical Bonding



All epoxy, phenolic, and polymer based coatings adhere to the surface via mechanical bonding and attach to the micro-imperfections of the surface. This bonding results in a lower adhesion strength. Combining this flaw with the added pressure created by corrosion (~ 2,200 psi), the coating can start to blister or peel off the surface of the substrate.

SOLUTION

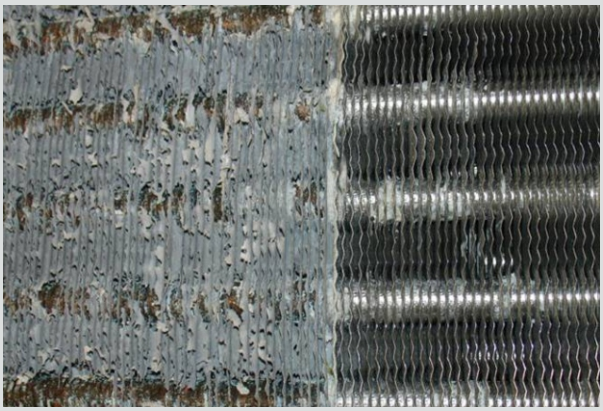
Chemical Bonding



Chemical bonding provides unmatched surface adhesion. SURFSIL chemically (covalently) bonds with the substrate and cures with an adhesion strength of over 4,000 psi to become, in a sense, a NEW material.

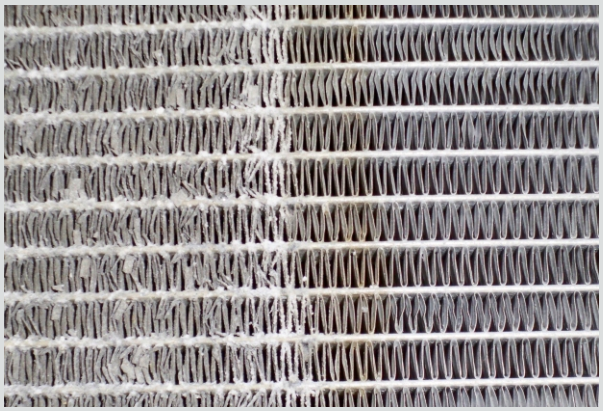
Which Side Would You Like Your Coil to Look Like?

PROBLEM / SOLUTION



Test performed for 5,000 hours using ASTM G85 A3 (a more aggressive, modified ASTM B117 using acidified sea water). The image above compares the performance of a bare coil, half of which has been treated with SURFSIL and half left untreated.

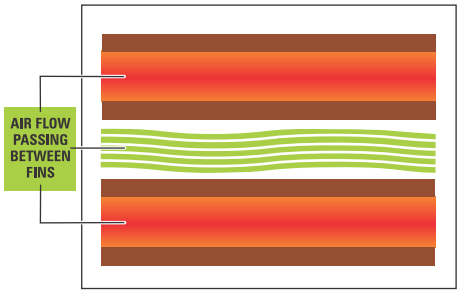
PROBLEM / SOLUTION



As the image above shows, even the micro-channel coils tested, using the ASTM G85 A3, shows how our intelligent coating design is able to penetrate into all the cavities of the coil, essentially sealing it from its environment and protecting it from corroding.

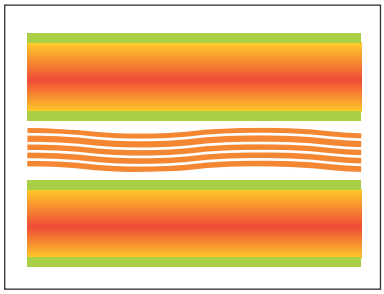
Heat Transfer

Thick Coating



Thicker coatings can increase your energy consumption up to 3-5% instantly, which raises cost, over works the unit, and most importantly, decreases equipment capacity leading to a reduction of space comfort.

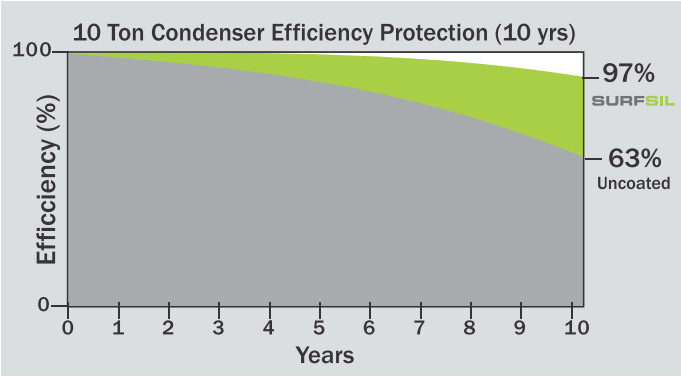
SURFSIL Coating



With a thickness of 0.5 mils and its silane properties, SURFSIL will negligibly affect heat transfer properties, keep energy costs down, and allow the unit to work as efficiently as it was designed to be.

Energy Savings

Based on studies conducted by FPL and other power companies, HVAC/R equipment lose an average 5% in heat transfer properties each year due to environmental deterioration. This percentage fluctuates with different environmental variables and in fact, most units will fail within ten years due to high pressure refrigerant alarm (a unit cannot properly function at an efficiency of 63%).



By applying SURFSIL, you will not only lower energy consumption and extend the equipment's life-span, you will also more than payback your initial investment to protect the unit from corrosion!

PAYBACK WITHIN 3 YEARS OF INVESTMENT!

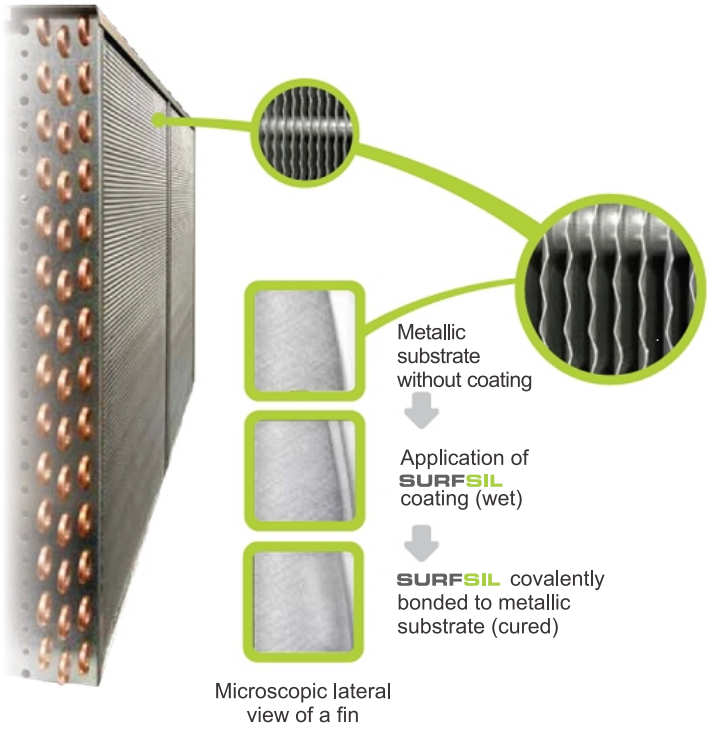
Energy Savings Table:

Savings of a 10-ton Condensing Unit				
Yr	$0.15/kwh	$0.20/kwh	$0.25/kwh	$0.30/kwh
1	~	~	~	~
2	$96.30	$128.40	$160.50	$192.60
3	$199.34	$265.79	$332.24	$398.68
4	$309.50	$412.66	$515.83	$619.00
5	$427.17	$569.56	$711.95	$854.34
6	$552.76	$737.02	$921.27	$1,105.53
7	$686.73	$915.63	$1,144.54	$1,373.45
8	$829.51	$1,106.02	$1,382.52	$1,659.02
9	$981.61	$1,308.81	$1,636.01	$1,963.21
10	$1,143.52	$1,524.69	$1,905.86	$2,287.03
Tot	$5,226.43	$6,968.57	$8,710.72	$10,452.86

LIFE TIME SAVINGS!

Characteristics Table

SURFSIL Characteristics	
Color	Clear, Glossy
Dry Film Thickness	10-15 microns
Temperature Range	-100˚F-1,000˚F



Microscopic lateral view of a fin

Test Performed

CORROSION & ULTRA-VIOLET RESISTANCE		HOURS TESTED
ASTM B117	SALT WATER (FOG) TEST	10,008 (No Sign of Corrosion)
ASTM G85	ACIDIFIED SEA WATER TEST	10,008 (No Sign of Corrosion)
ASTM D5894	CYCLIC SALT FOG/UV EXPOSURE TEST	6,048 (No Sign of Damage)
ASTM G154	ACCELERATED WEATHERING/UV EXPOSURE	1,008 (No Sign of Damage)

ABRASION, IMPACT RESISTANCE & FLEXIBILITY		RESULTS
ASTM D2794	RESISTANCE OF COATINGS TO IMPACT	39.56 lb/in^2 Without Peeling or Cracking
ASTM D522	MANDREL BEND TEST	No Peeling or Cracking
ASTM D3359	ADHESION BY TAPE TEST	(5B) 0% Removed
ASTM D3363	PENCIL HARDNESS TEST	5H

MOLD & BACTERIA RESISTANCE		RESULTS
ASTM G21	RESISTANCE OF MATERIALS TO FUNGI, MOLD, ETC	Pass

Authorized Dealer Contact Information

advancoat
CORROSION SPECIALISTS

Authorized Distributors

U.S.A.
Mailing Address:
7050 W Palmetto Park Road
Suite # 15-555
Boca Raton, FL 33433

SHIPPING ADDRESS
7900 NW 68 Street
Miami, FL 33166
Phone: 561-367-0320
Fax: 305-647-0786
Mobile: 305-790-9925

MEXICO
Av. Prolongación Alamos 47-2
Santiago Occipaco,
Naucalpan Estado de México,
C.P. 53250
Phone: 554-612-4112

SHIPPING ADDRESS
Prol. Circuito La Carambada S/N
Col. Modelo
Querétaro, Qro.
C.P. 76206
Mexico