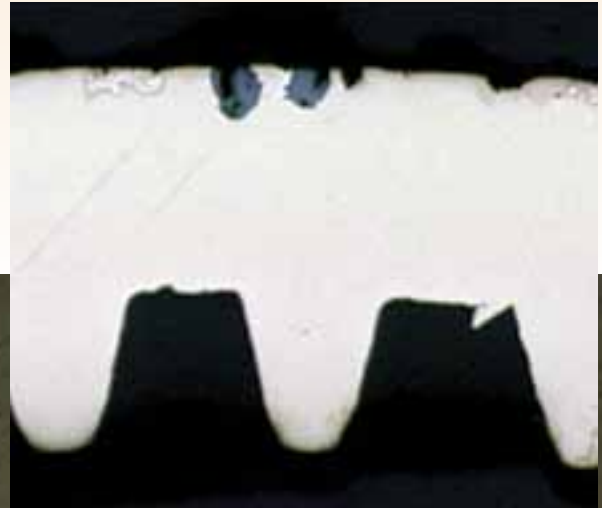




STOPS FORMICARY CORROSION IN ITS TRACKS

The Nortek Global HVAC line of Anteater® coils helps prevent leaks caused by formicary corrosion and is ideally suited for climates and environments where formicary corrosion is an ongoing problem. They are designed to outlast standard coils in high-moisture environments. Independent tests indicate that the Anteater coil with UNIGUARD™ alloy performs 50 times better than the standard coil copper regardless of copper thickness.



Anteater coil after 180 days of accelerated testing. Pitting stops; no formicary migration through tubing; no leak.



Traditional copper coil showing formicary corrosion. Field failure occurring just two months from manufacture date.

WHAT IS FORMICARY CORROSION?

As the major cause of indoor coil leaks, formicary corrosion occurs in copper-based alloys and is comprised of small, wandering pits that are not observable to the unaided eye. The tunneling effect that occurs to the copper material is similar to tunnels formed in an ant's nest. "Formicary" literally means "ant's nest."

The standard industry copper alloy used in indoor coils can form leaks within the first three years after being installed in highly susceptible regions of the country with high humidification levels. Standard copper coil life expectancy varies depending on organic acid formed, and how quickly it can make it through the copper grain to form a hole.

CAUSES OF FORMICARY CORROSION.

There are four elements that lead to formicary corrosion. If one factor is removed, then the corrosion can be prevented. These elements are copper, moisture, oxygen and acid. The combination of these elements leads to formicary corrosion.

Copper – An indoor coil is an integral part of a central air conditioner and heat pump system. Typically, indoor coils consist of copper tubing used for heat transfer.

Moisture – When condensation is present on the coil, it becomes susceptible to formicary corrosion. Formicary corrosion is mostly found in southern markets because moisture is typically present on the coil year-round.

Acid – Environmental contaminants such as household particles collect on the copper tubing and mix with the moisture. This forms an organic acid that begins to eat away at the copper. The acid creates a tunneling effect similar to that of ant tunnels, penetrating the copper completely and creating the leak.

Tighter home construction, building materials, household cleaners, carpet chemicals, acidic foods and adhesives are just a few examples of common household items that contribute to formicary corrosion. It is nearly impossible to control these airborne particles just as it is to prevent moisture from forming in a high-humidity environment.

Anteater® Coil Exhibits 50X the Formicary Corrosion Protection of Standard C12200 Copper

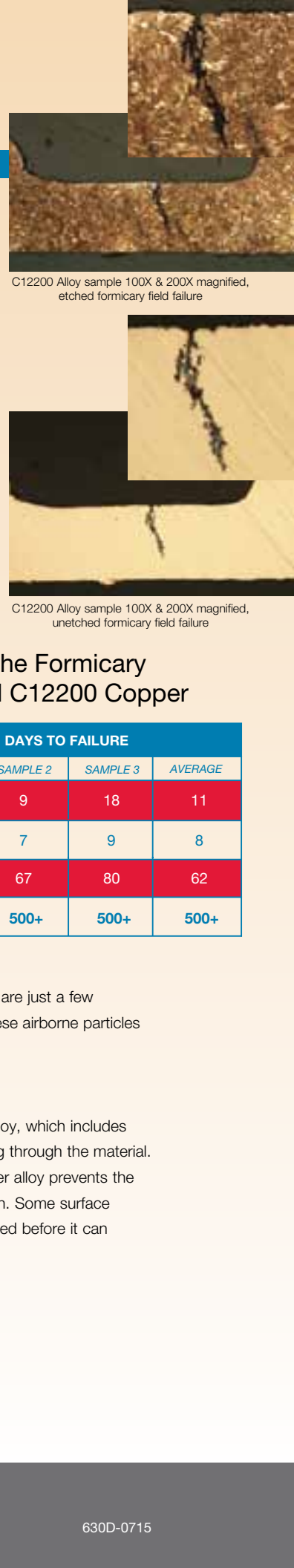
MATERIAL	DAYS TO FAILURE			
	SAMPLE 1	SAMPLE 2	SAMPLE 3	AVERAGE
Industry Standard Copper	5	9	18	11
30% Increase Wall Thickness (.014")	7	7	9	8
Tin Coated	38	67	80	62
Nortek Global HVAC Anteater coil	500+	500+	500+	500+

Accelerated Formicary Testing Results

HOW ANTEATER® WORKS.

The Anteater coil is made with UNIGUARD™ copper alloy, which includes zinc additives to stop formicary corrosion from tunneling through the material. When acid begins to attack the coil copper, the Anteater alloy prevents the acid from tunneling completely through the copper grain. Some surface pitting will still be evident, but the damage will be stopped before it can cause a leak.

Anteater® is a registered trademark of Nortek Global HVAC LLC.
UNIGUARD is a trademark of Luvata Franklin, Inc.



C12200 Alloy sample 100X & 200X magnified, etched formicary field failure

C12200 Alloy sample 100X & 200X magnified, unetched formicary field failure



C12200 Alloy sample 125X magnification. Mounted with failure after 7 days of accelerated formicary corrosion testing.



Anteater sample 125X magnification. Mounted after 180 days of accelerated formicary corrosion testing with no through-the-wall failure.

