



Technical Bulletin

A Solution for Dirty Socks Syndrome (DSS)

A problem commonly encountered during the heating season is called Dirty Socks Syndrome. A foul odor produced by the evaporator coil of some heat pump systems. It's apparently caused by an accumulation of biological contaminants on the indoor heat pump coil during the summer months.

Researchers speculate that microorganisms - which are commonly found in the soil, water and air - are deposited on the indoor coil during the summer, when the coil is cold and wet, and that these colonies thrive and grow during the cooling season, while the indoor coil is damp and cool.

These microorganisms apparently do not produce an odor problem during the summer cooling months even when spores are entrained in the supply air. The odor is produced when the airborne contaminants are burned during the heat pump defrost cycle when the coil is warmed killing these microorganisms which may be growing on the coil.

Three conditions are normally associated with an odor problem:

1. Biological contaminants are deposited on the coil.
2. The indoor coil is wet and cold during the cooling season.
3. Heat is introduced killing the micro-organism.

The Air Conditioning and Refrigeration Institute in its "General Maintenance Guidelines for Improving Indoor Air Environment" states: "In the cooling season, humidity control will be largely dependent on the equipment selected, thermostat setting(s), and the amount of air moving across the evaporator coil. Keeping the relative humidity below 60% in the cooling season will help prevent the growth of mold, mildew, bacteria, etc. in ducts, in HVAC equipment, and on walls and ceilings."

In addition, "All HVAC/R systems must be kept clean so that the build-up of dirt, dust and microbes and other possible contaminants can be minimized. This will reduce the probability of mold and bacteria growth which causes odors, respiratory problems or other potential health problems. This includes the ductwork, coils, air filters, condensate drain pans, and equipment cabinet, etc." Even though many quick fixes are utilized like Clorox washes, special use germicides, the problem commonly re-occurs unless the coil is removed and replaced.

There are a number of ways to treat or prevent this problem. Bronz-Glow's Husky Coil Coat with Intersept is one such way. Bronz-Glow utilizes its protective coating as the vehicle to introduce and apply an anti-microbial biostat to the fin tube coil surface as part of its finish coat. The anti-microbial biostat utilized is a product called Intersept, which is widely accepted for use in retarding microbe growth and for HVAC/R air stream applications. Bronz-Glow coated replacement coils are permanent fixes for those who previously experienced the dreaded Dirty Socks Syndrome (DSS)

Bronz-Glow also offers customers a variety of coil cleaning agents including our Evap Zap. Evap-Zap is a high foaming self rinsing coil cleaning agent. We package our product in a small aerosol can so you can fit your hand into the air handler. This product is highly recommended as the first try in eliminating DSS as it's the least expensive and less harsh alternative.



Air Handler with an un-coated coil and a coil coated with Bronz-Glow's Husky Coil Coat and Intersept to retard to the Dirty Socks Syndrome.

For more information contact;

Bronz-Glow Technologies, Inc. <http://www.Bronz-Glow.com> or (800) 555-6385