Southern Comfort

PROTECTIVE SYSTEMS

Coating Comparison

Type of Coating	Siloxane	Phenolic	Urethane	Epoxy
Market Name	**Adsil's MicroGuard1™ 3500**			
Bonding Method	**Chemical**	**Mechanical**	**Mechanical**	**Mechanical**
Organic/Inorganic	**Inorganic**	**Organic**	**Organic**	**Organic**
Corrosion Protection	**15000 Hours ASTM B117**	**No Data**	**No Data**	**No Data**
Corrosion Resistance	**ISO 16773-3 Barrier Resistance**	**No Data**	**No Data**	**No Data**
Dry Film Gap Thickness	**3 to 8 Microns**	**2 to 7 Mils**	**1.5 to 3 Mils**	**1 to 4 Mils**
Energy Savings	**No Data**	**No Data**	**No Data**	**No Data**
Field Applied	**Yes**	**No**	**Maybe**	**No**
Heat Transfer	**Improvement**	**Reduction**	**Reduction**	**Reduction**
Mold Proliferation	**No Mold (ASTM G21 rated 0)**	**Yes**	**Yes**	**Yes**
Repairable	**Yes**	**No**	**Maybe**	**No**
Warranty	**5 Year***	**1 Year**	**3 & 5 Year**	**3 Year**
Chemical Resistance	**Excellent**	**Excellent**	**Good**	**Good**
UV Resistance	**Excellent**	**No**	**Moderate**	**Poor**
Casing Coating	**Yes**	**Yes**	**Yes**	**Yes**
Whole Unit	**Yes**	**Maybe**	**No**	**No**
Bridging	**No**	**Yes**	**No**	**Yes**
Color	**Clear**	**Brown**	**Silver**	**Black**
Post Maintenance Cleaning	**High Foaming Non-Acid Coil Cleaner**	**Water Only**	**Water Only**	**Water Only**

Notes:

(1) MicroGuard1™ 3500 (MG1-3500) forms a "Covalent" (chemical) bond by sharing an electron with the substrate, while all other coatings form a "London Force" (mechanical) bond, much like an adhesive.

(2) Organic coatings are comprised of a carbon chain of elements that feed mold and break down from exposure to UV light and most chemicals. Inorganic compounds do not have this carbon chain, cannot oxidize and cannot feed mold.

(3) There are **25.4 Microns in 1 Mil**. Coating thickness impacts flow through the fins and run time to create the flow. A thicker coating permits less flow so the equipment has to work harder or be sized and designed accordingly.

(4) Most of the coating manufacturers have field-applied products but the practicality of getting a 3 mil, wet paint through multiple fins and rows is low.

(5) MicroGuard1™ 3500 (MG1-3500) will adhere to exposed metal but will not adhere to itself. In other words, it will not build up. Paints will build and further attempts to repair will thicken the coating.

(6) MicroGuard1™ 3500 (MG1-3500) demonstrates sustained energy savings. Thickness is the main determining point for insulating properties of a coating.

(7) Although the literature claims no bridging occurs, it is physically impossible to dip or spray a wet coating measured in mils without bridging in crevices that are less than 1/8".

(8) *MicroGuard1™ 3500 (MG1-3500) offers a limited 5-year product warranty at no extra cost, the warranty requires six-month interval inspections (quarterly if directly on the water) and cleaning by the owner's representative.