

# Antimicrobial Comparison Sheet

All Antimicrobials are designed to kill, eliminate, destroy, mitigate and prevent the growth of microbes. However, there are many differences between antimicrobials in how they are designed to react with micro-organisms. All antimicrobials fall under two classifications; Bound and Unbound. A bound antimicrobial is chemically bonded to the substrate that it is applied to, thereby becoming a permanent part of that substrate. Unbound antimicrobials are applied to a substrate and must leach off (come off) the substrate to react with the micro-organisms. To understand the difference and you will understand how organosilane technology molecularly binds with the substrate remaining intact on the treated substrate. It is the only technology that modifies the surface and remains to control the negative effects of mold, fungi, algae and other micro-organisms.

	SILANE BASED	SILVER BASED	TRICLOSAN BASED	CHEMICAL BASED
Common Antimicrobials Names and Variants	Microbe Guard The Aegis Shield	AgION EnviroCare Protective Coatings Group Fosshield Alphasan	Microban Amicor Sanitized UltraFresh Biofresh	Fosters FiberLock Protective Chemicals
Mode of Action to Kill Microbes	Engineered nano-structures mechanically punctures the microbes cell wall	Releases ionic free radicals that react with the cell DNA and disrupt critical life process in the cell	Releases toxic bischlorinated phenol (PCB) for consumption or cellular absorption, causing lethal mutations in the cell	Releases poisons for consumption or cellular absorption, causing lethal mutations in the cell
Leaching: Antimicrobial bleeds off substrate into environment	Does not Leach Does not Migrate	Leaches for its Mode of Action Must leach to work	Leaches for its Mode of Action Must leach to work	Leaches for its Mode of Action Must leach to work
Antimicrobial Durability	Permanent	Embedded in a coating. Coating must wash away to release silver ions	Embedded in a coating. Coating must wash away to release toxic chemical to react with cell	Embedded in a coating. Coating must wash away to release poison chemical to react with cell
Effectiveness	Broad Spectrum on all known mold, fungi, bacteria, algae and yeast	Action variable based on concentration and use conditions	Action variable based on concentration and use conditions	Action variable based on concentration and use conditions
Adaptive organisms (Super bugs)	Laboratory proven not to promote adaptive organisms	Can create adaptive organisms Resistant species identified	Can create adaptive organisms Resistant species identified	Can create adaptive organisms Resistant species identified

	Antimicrobial Base	Manufacture Warranty	EPA Registered	Patented Protected	Nationwide Coverage	Factory Trained Applicators	Off Gases	Flammable	Toxic
Microbe Guard	Water	YES	YES	YES	YES	YES	Water	NO	NO
The Aegis Shield	Methanol	NO	YES	NO	NO	NO	Methanol	YES	YES

There are two main differences between Microbe Guard and The Aegis Shield. The first difference is that Microbe Guard is water based and The Aegis Shield is over 49% methanol based. Secondly, Microbe Guard provides a manufactures warranty for all applications. The manufacturer of The Aegis Shield, Aegis Environmental Management Inc does not offer a warranty for their product. The only warranty that is provided for The Aegis Shield is by one of their distributors. Should there ever be a warranty claim; their manufacture would not take any responsibility for any such claim.