

# Antimicrobial Surface Coatings Comparison

Coating Class	Surface Photocatalyst	Quaternary Ammonium	Silver	Triclosan
Trade name(s)	<b>OxiTitan™</b>	Aegis, SurfaceAide, 44 Other Registrants	Agion, HeiQ	Microban
Active Component(s)	Zinc, Titanium Dioxide	Ammonium Chloride	Silver ions	Phenoxy Phenols (PCPP)
Mode of Action	Contact Photo-Oxidation	Contact Dilute Chloride Salts	Leaching Heavy Metal in H <sup>2</sup> O	Leaching Poison
Effective Against:				
<b>Bacteria</b>	Active Bactericide	Bacteriostatic	Bactericide	Bactericide
<b>Viruses</b>	Active Virucide	Ineffective Against Non- enveloped Viruses	Virucide	No
<b>Spores</b>	Active Sporicide	Fungistatic	Sporicide	No
<b>VOCs</b>	All	No	No	No
<b>Odors</b>	All	Bacterial Only	Bacterial Only	Bacterial Only
Toxicity Risks To:				
<b>Humans</b>	No	High Toxicity to Skin and Eyes	Bio-Accumulative	Endocrine Disruptor
<b>Animals &amp; Birds</b>	No	High Toxicity to Skin and Eyes	Bio-Accumulative	Endocrine Disruptor
<b>Aquatic Systems</b>	No	Highly Toxic, Zero Discharge Allowed	Highly Toxic, Bio-Accumulative	Toxic
Environmental Fate Risk	None	5-year Degradation Time	Very High	Degrades to Dioxin
Resistant Bacteria Promotion	No	No	Yes	Yes
UV Damage Protection	95%	No	No	No
Metal Corrosion Protection	Yes	Corrosive	No	No
Hydrophilic Self- Cleaning	Yes	No	No	No
Application Method	Water based spray	Spray	Epoxy paint	Incorporated at Manufacture
Treatable Surfaces	All Substrates and Textiles New or Existing	Hard Surface or Textile	Paintable	Incorporated at Manufacture
Durability	Very High Binding	Removed by Surfactants (Detergents or Soap)	Incorporated	Incorporated at Manufacture
Service Interval	6 mo. - 3 Years	1 -3 months Unless Cleaned	Repaint	Item Replacement
Material Cost	< 5 cents/ft <sup>2</sup>	>5 cents/ ft <sup>2</sup>	\$1.68/ft <sup>2</sup>	N/A
Regulatory Guidance	US EPA FIFRA 25B Minimum Risk Pesticide Exempt From Registration	US EPA FIFRA Registered	US EPA Registered Currently Restricted For Review	US EPA Registered Under Regulatory Review EU banned