



# FluoroMed<sup>®</sup> Anti-Microbial

Advanced Coating Technology

Every medical device we coat touches lives<sup>®</sup>

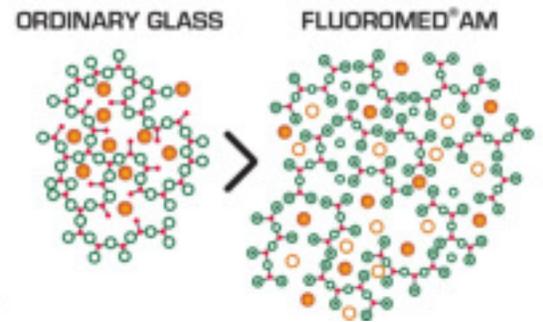
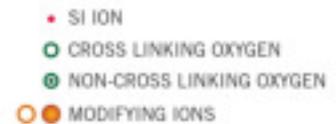
## How do Anti-Microbial coatings kill pathogens?

Silver Oxide is formed on the surface of the FluoroMed<sup>®</sup> coating, which simultaneously attacks multiple sites within the pathogenic cell to deactivate critical physiological reproductive functions of the cell. Silver ions have a high affinity for negatively charged side groups on bacterial molecules which bind to the bacterial DNA. This hinders bacterial replication and simultaneously deactivates the metabolic enzymes of the cell. The result is that reproduction of the microorganism is killed. A key advantage of anti-microbial silver is its remarkably low human toxicity combined with a broad spectrum of antibacterial efficacy.



## How are FluoroMed<sup>®</sup> AM coatings made?

The addition of nano-size glass particles are formulated into a specified coating containing selected metals that produce anti-microbial silver oxide ions in the presence of moisture. These particles are dispersed at the surface and also throughout the coating. A higher concentration of anti-microbial particles can be created at the surface. Glass, as the matrix material, has a high chemical inertness and the ability to retain metal ions that are continually liberated in the presence of moisture. FluoroMed<sup>®</sup> AM uses inorganic materials because they have superior features of safety (non-volatility) and heat resistance to 500°C. These anti-microbial materials have been tested safe for the human body. Testing for anti-microbial properties is performed at a third-party laboratory with the accompanying microbe kill rate efficacy test result documentation.



## Benefits of FluoroMed<sup>®</sup> AM:

- More than 100+ liquid and powder coatings applied by SSG can be modified to have anti-microbial properties with an affordable price increase.
- Safer medical devices can be created with a coating of FluoroMed<sup>®</sup> AM.
- Successful anti-microbial applications on all medical grade metals, plastics, glass, and silicone rubber. All of these substrates can have anti-microbial properties with laboratory-tested pathogen kill rates of 99.9%.
- Thickness of coating is unchanged with anti-microbial application. Coating thickness from .0002" to .0015" (.0005 to .0037mm) added to device surfaces.
- Low friction coating properties are unaffected by the anti-microbial nano-particles.
- The development of microbe resistance due to generational mutations to anti-microbial silver would be extremely rare because an organism would have to undergo simultaneous mutations in every critical function within a single generation to escape the silver's influence. Antibiotics cannot provide this.

### LIST OF BACTERIA FluoroMed Anti-Microbial is effective against

The two main focus types of bacteria are Escherichia coli and Staphylococcus aureus, however many others have tested and FluoroMed<sup>®</sup> AM, proven to be effective as follows:

- Escherichia coli • Staphylococcus aureus  
 MRSA • S. Enteritidis • V. Parahaemolyticus  
 B. Subtilis • Streptococcus • Staphylococci  
 Klebsiella • Clostridium • Proteus • Listeria  
 Aeromonas • Flavobacterium • Xanthomonas  
 Acinetobacter • Entero-viruses • Aspergillus  
 Pseudomonas aeruginosa • Candida Albicans  
 Salmonella • Enterococcus faecalis  
 Enterococcus faecium • Clostridium difficile



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