What is Agion and how does it work?

Agion is an anti-microbial compound composed primarily of silver ions which have been proven in anti-microbial use throughout history. Carrier’s agion coated interior panels of the 39M provide clean, long lasting anti-microbial protection by working 24/7 resisting the growth of microbes on the equipment panels.

Agion incorporates silver ions into a patented zeolite carrier providing an area for these ions to exchange with other positively charged ions (often sodium) from the moisture in the environment. Once exchanged, these now “free” silver ions are attracted to oppositely charged hydrogen ions commonly found in most bacteria and microbes. The bacteria and microbes’ respiration and growth are now abruptly halted since the hydrogen ions are no longer available.

How effective is Agion?

Agion coated steel has proven to be extremely effective at reducing and inhibiting microbial growth on the coated surfaces over a short time period. A study conducted by the Department of Microbiology at Miami University has proven that stainless steel coated with agion can reduce the amount of such bacteria as e. coli and listeria by 99.998% in only a 4-hour period, as well as near elimination of the bacteria in a 24-hour period when compared to un-coated stainless steel.

Agion is registered for use under the EPA, including food and water contact, HVAC, toys and toothbrushes as well as being listed under the FDA, USDA, NSF and CTFA.

Effect on Escherichia coli after 24-H exposure to Agion coated surfaces

Below shows the results of a 10-day fungal test using Aspergillus niger (common mold) in accordance with the ASTM G-21 Test protocol. The control dish used a plate of bare stainless steel while the agion dish used a plate of agion coated stainless steel. As can be seen, mold growth was non-existent on the stainless steel plate coated with agion.

What can Agion provide in the 39M?
Carrier’s pre-coated agion on the interior panels of the 39M provides a neat, clean and long-lasting coating with the superb anti-microbial performance that silver has displayed for centuries. Benefits of using agion include:

• Agion is applied during the steel forming process providing durable, long lasting protection
• Silver ions are released at a slow, steady rate insuring protection for the life of the product
• Agion coating protects the interior of the 39M against odor-causing bacteria, mold, and mildew during the life of the product

Summary
Agion is a cost effective anti-microbial solution certified for use in HVAC systems by the United States Environmental Protection Agency (EPA). Combine Agion, in the entire unit, with UV-L ultraviolet germicidal radiation on coil sections for the maximum anti-microbial control offered by Carrier.