

## Anti-Microbial *Polypropylene Keyboard and Powder Coated Surfaces*

### **What Are they?**

Bacteria, mold, fungus, and algae pose not only health hazards but can cause unpleasant odors, discoloration, staining, as well as forming biofilms (slime and mildew) and eventually deterioration of mechanical properties, increased maintenance or reduced service life of the finished product. Anti-microbial agents inhibit the growth of these damage and disease causing microbes on the surface of treated items.

### **How Does it Work?**

Anti-microbial coating technology involves adding a biocide, in this case silver ions, into the coating or polymer. Silver has been used for centuries as an anti-microbial agent and has been proven safe and effective. In the presence of moisture a chemical reaction takes place on the coated surface. Microbes have a negative charge; the silver ions, with a positive charge are drawn from the coating to the microbes. The released silver ions bind to the microbe and inhibit the activity of the enzymes in the cell wall, membrane, and the cell's nucleic acids. The result is that the cell wall of the microbe bursts, and the microbe is destroyed.

### **As reported by TCI Powder Coatings, Ellaville, Georgia** [www.tcipowder.com](http://www.tcipowder.com)

- AATCC Test Method 100  
Testing against *Klebsiella Pneumoniae* and *Staphylococcus Aureus*  
Result-reduction in bacteria by 99.9%
- JIS Z 2801  
Testing against *Escherichia Coli* and *Staphylococcus Aureus*  
Result-reduction of bacteria by 99.9%

### **As reported by CIBA Inc, Basel, Switzerland** [www.ciba.com/irgaguard](http://www.ciba.com/irgaguard)

#### IRGAGUARD® B 5000 series **Characteristics/Properties**

- Inorganic, silver-zeolite based antimicrobials
- Special zeolite design allows controlled silver-ion release
- Highly active against a wide range of bacteria, mold and yeast
- Designed for use in polymers processed at temperatures up to 500° C
- Optimized against light induced discoloration

