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## OVERVIEW - RITEC'S 'SPECIAL REPORT'

This is an overview of Ritec's Special Report "Winning Battles Against Infectious Diseases Caused by Bacteria and Viruses". Each day these battles are fought by countless persons and organizations around the world - spending substantial efforts, time and money.

Frequently these expenditures are wasted and battles are lost. A key reason is that basic rules and guidelines for surface hygiene that are well-known in healthcare industries are not so well-known in other industries. An example is the fact that unless a surface is effectively cleaned it cannot be properly disinfected.

Now the battles are intensifying because of concerns about increasing amounts of time spent indoors because of the global health pandemic and the winter flu season in many countries. The greatest concerns include surfaces that are touched frequently.

Frequently-touched surfaces are not only breeding grounds for bacteria, but they also serve as transfer points for bacteria and viruses from one person to another. As a result, these surfaces can become "super-spreaders" of germs and cause serious threats to health.

The Special Report focuses on solutions developed and improved by Ritec over the past 40 years. These solutions are verified by actual field experience under all types of conditions worldwide. This extensive experience under the harshest conditions proves that Ritec solutions eliminate or greatly reduce the development of all types of contaminants to all types of glass surfaces, exterior, and interior.

Ritec's proven solutions for winning battles against infectious diseases caused by bacteria and viruses are based on the following:

**1. A basic rule of surface hygiene** - a surface cannot be properly disinfected unless it is effectively cleaned first.

**2. Standard bare glass surfaces cannot be effectively cleaned**, therefore they cannot be properly disinfected. The reasons:

- a) the standard cleaning method for glass and other hard surfaces focuses on washing visible dirt and other contamination from the surfaces. This is done using a mixture of detergent and warm water agitated on the surface with a cloth, sponge, or brush.

Independent and governmental specialists advise the above standard method for washing away visible dirt. This method, however, will not remove bonded contaminants.

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- b) surfaces of the standard bare glass are chemically reactive, therefore substances that are also reactive bond firmly to these glass surfaces. Bonded substances cannot be washed away by standard cleaning methods such as those described above.

c) chemically reactive substances that firmly bond to chemically reactive standard glass surfaces include:

- interior - limescale deposits firmly bonded to shower glass, splashbacks and other interior glass surfaces exposed to hard water;
- exterior – chemically reactive substances can create a mixture or “cocktail” of firmly bonded contaminants including;
  - mineral salt deposits from sea spray;
- metal oxide particles from railway lines;
  - various pollutants from industrial and construction sites.
- interior and exterior – particles of black carbon or unburned hydrocarbons from air pollution.

Carbon is an essential source of nutrients for bacteria, therefore black carbon particles chemically bonded to reactive standard bare glass serve as “feeding and breeding grounds” for bacteria. Details are in the Special Report.

### **3. Proven solutions are already available**

The Special Report focuses on solutions proven to eliminate or greatly reduce the development of bacteria and viruses dependent on bacteria as follows:

#### **a) preventing bacteria from developing on standard glass by depriving the bacteria of two requirements essential for any living organism –**

- nutrients;
- moisture.

Preventing bacteria from developing on standard glass surfaces also inactivates viruses that depend on bacteria as “host” cells.

In addition, preventing bacterial development on glass surfaces inhibits the progression of the Bacteria Trail. This “trail” leads to the six “links” in the Chain of Infection as described in the Special Report.

The Bacteria Trail describes a pathway of bacterial development, growth, and transmission leading to infectious diseases. This “trail” includes the Chain of Infection, known in healthcare industries as a standard process or series of events that must happen for pathogenic or disease-causing germs to develop.

#### **b) stopping bacterial growth on standard bare glass surfaces where development is already underway;**

#### **c) killing bacteria on other surfaces such as paintwork, plastics, metals, and wood.**

The solutions are in the Ritec ClearShield Eco-System<sup>®</sup>, the only complete system for glass surface renovation, protection, and maintenance.