

## HOW DOES **BACOBAN DLUS®** WORK? Controlled Release Technology

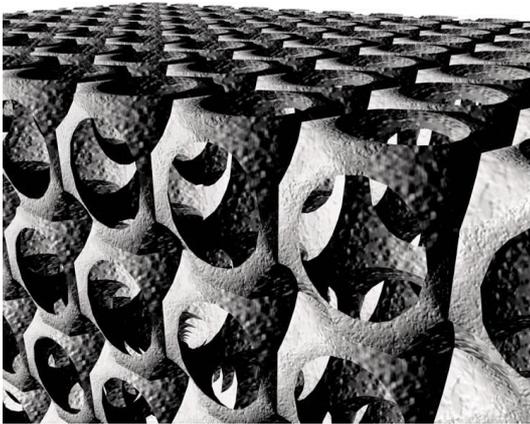
BACOBAN DLUS® (Drug License United States) is a surface cleaner and disinfectant that was formulated in Europe over 10 years ago and has been used in healthcare and other markets with great success. BACOBAN DLUS is now being introduced to the North American market and holds DIN (Drug Identification Number) from Health Canada. The term Controlled Release Technology is a new concept to North America and requires some explanation.

BACOBAN DLUS utilizes a globally patented new concept referred to as “Controlled Release Technology” which is a method that highly advances the disinfection process for surfaces. Traditional chemical products and procedures have wet contact times, but the killing action for pathogens stops once the agent dries or evaporates. This is not true with BACOBAN DLUS, as it remains on the surface in an active state with no biofilm or build-up of any kind. When BACOBAN DLUS is applied, it leaves a thin layer on the surface that is measured on the nanoscale of measurement. This microscopic layer is not detectable by sight or touch and does not change the surface in any way.

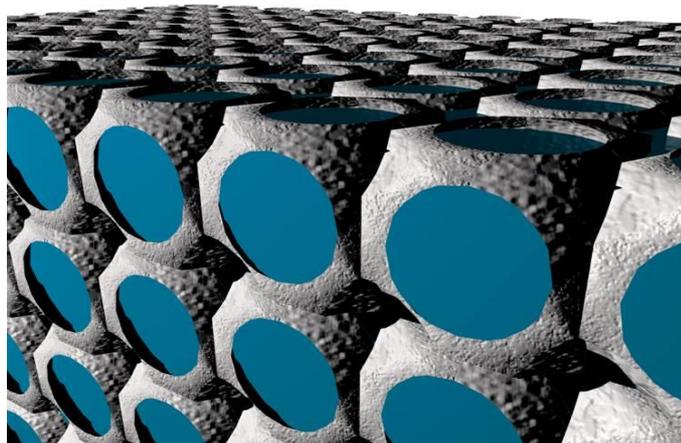
### Why the Anti-microbial effect for up to 10 days?

After BACOBAN DLUS is applied, its carrier (which is simply water) evaporates. BACOBAN DLUS then forms nano-sized sponges which store the commonly found biocide/active ingredient, Benzalkonium Chloride.

**Sponge structure on a nanoscale in an empty state**

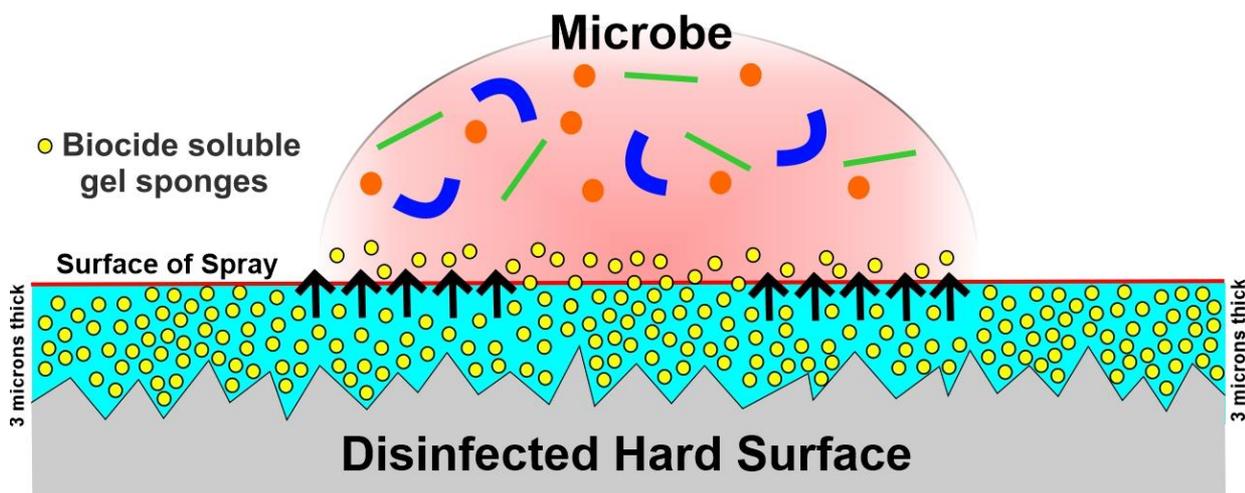


**Sponge structure with Benzalkonium Chloride the active Ingredient in Blue**



The biocide “housing” stored within the microscopic layer is referred to as Sol-gel. When a new pathogen settles on this layer there is an interaction between the pathogen’s liquid carrier and this microscopic layer. The interaction triggers a release of the disinfectant from the blue housing. This delivers the disinfectant (BZK) through a controlled release system which can last on a surface for up to 10 days with a proven process that utilizes patented technology to kill the invading pathogens.

BACOBAN DLUS is the only product in the world with this ability!



### Why controlled release technology saves lives?

Conventional disinfectants are effective immediately – but only for a short period of time. Microorganisms are only killed during the first few minutes of a traditional disinfectant’s active period. Within minutes, when the traditional disinfectant has evaporated, the area treated is again subjected to microbial strains until the next disinfection. The net result is a long hygiene gap that continues until the next scheduled disinfection. During this time, surfaces are subjected to the repeated settlement of microorganisms.

With BACOBAN DLUS®, the primary objective was to develop a surface disinfectant that not only disinfects but also actively stands guard until the next scheduled disinfection.

The fact that the research development team in Germany created a method of effectively maintaining a disinfectant on the surface for up to 240 hours/10 days was a complete surprise not only to the scientists doing this research, but to all independent test labs and health facilities engaged in the testing of BACOBAN DLUS.

The long-lasting and continuing effect of BACOBAN DLUS does not change hygiene cleaning procedures, but rather ensures higher safety against the spread of germs and viruses and reduces the risk of cross contamination during these hygiene gaps.

### Results according to ASTM E 2180:

The highest microbiology testing facility in the world proved that surfaces disinfected with BACOBAN DLUS remained active throughout the 10 day testing period.

	<b>3 Days</b>	<b>5 Days</b>	<b>10 Days</b>
Escherichia coli	> 99,997 %	> 99,994 %	> 99,996 %
Pseudomonas aeruginosa	> 99,996 %	> 99,995 %	> 99,997 %
Staphylococcus aureus	> 99,997 %	> 99,996 %	> 99,995 %
Candida albicans	> 99,997 %	> 99,992 %	> 99,997 %
Aspergillus niger	> 99,995 %	> 99,992 %	> 99,837 %