



# BLEACH

## No Longer the Universal Disinfectant

### Background

For many years bleach, or sodium hypochlorite, has been used as an inexpensive universal disinfectant. Over the last several years, the E.P.A. has put pressure on bleach manufacturers, including the large national brands, to discontinue promoting bleach as an antimicrobial unless the product has been tested and properly registered for efficacy. Here are a few commonly asked questions about bleach:

### How is bleach made?

The raw materials used for making **bleach** are chlorine, caustic soda, and water. Chlorine and caustic soda are **produced** by putting electricity through a sodium chloride salt solution.

### Is bleach safe for the environment?

Once mixed with water, **bleach** reacts with other chemicals to form byproducts, such as dioxins. **Bleach** is especially damaging to the **environment** because it lingers for many years. Even small amounts of **toxic** chemical can accumulate in air and water over time, which can eventually result in adverse health effects.

### Is bleach a stable chemical?

Commercial bleach can be very unstable in that the active ingredient (sodium hypochlorite) will dissipate over time. The manufacturer may use as much as **10%** active ingredient to water but, by the time the product reaches the consumer, the actual active may reduce to as low as **4%**. So, there is no way to accurately determine the solution's efficacy!

### Is bleach a disinfectant?

The E.P.A. (Environmental Protection Agency) requires that any product, including bleach, that makes specific claims for either human or animal efficacy be thoroughly **tested**, **registered** and **properly labeled**. Every batch, of an E.P.A. approved disinfectant, must meet stringent testing and approval before it can be packaged and sold to the consumer.

### Is bleach a good cleaner?

Bleach isn't made with a surfactant (detergent), which is needed to clean and remove biofilm. So, a **second solution** and **step** will be required before applying the bleach solution.

### Can bleach be hazardous to use?

Yes! In addition to being a known **carcinogen**, bleach can also irritate skin and permanently **damage eyes**. Bleach can have a negative impact on an animal's **olfactory sense** and should not be used around working dog breeds. Cats are especially sensitive to bleach and can suffer from **upper respiratory distress** when bleach is used to clean in the cattery environment.

Bleach is extremely aggressive to many surface materials including metal, vinyl, upholstery and fabrics.

### Is it safe to store bleach near food?

No! Bleach will naturally expand in its container. So, to prevent the container from expanding, the manufacturer will use a vented cap to allow the gas to escape into the air. The gas, in a confined environment, does have the capability of **permeating surrounding surfaces**, such as cardboard and paper thus creating a potential for the contamination of food products.

