Understanding Bleach:
Breaking Down the Chlorine Bleach Mixture

Chlorine Bleach is a common, cost-effective method to sanitize and disinfect, but it comes with stability issues and can be corrosive to surfaces. What are the pros and cons of using Chlorine Bleach?

What is Chlorine Bleach?

Chlorine Bleach is a mixture of sodium hypochlorite, sodium hydroxide, and water. It can be used as a surface disinfectant, and some Bleach products are approved to sanitize surfaces — when pH levels are accurate and the concentrations are appropriate for the application.

To see if you are using Chlorine Bleach, check the label. Look for ingredients like "sodium hypochlorite," "hypochlorous acid," "sodium dichloroisocyanurate," or "dichloro-s-triazinetrione."

Bleach Efficacy

Chlorine Bleach is highly effective at killing a wide variety of bacteria, and it is relatively inexpensive. Water hardness does not affect the performance of Chlorine Bleach.

Bleach is light-sensitive, and exposure to light also affects the stability of Bleach and therefore the effectiveness. The more exposure to light, the less active the solution.

Bleach is an effective surface disinfectant, but not necessarily a good surface cleaner. In addition, Bleach rapidly loses effectiveness in the presence of dirt. To clean and disinfect your surfaces, you may need to scrub and rinse the surface and then apply the Bleach solution for the best disinfection. Most Bleach solutions will require rinsing with clean water after use.

If you are making the Bleach Solution by the 1:10 dilution method, these solutions need to be changed out frequently to remain effective.

The concentration of the Bleach Solution should be checked as specified under the Health Canada Food Code and as indicated by the manufacturer's directions on the label to ensure the solution has been correctly prepared.
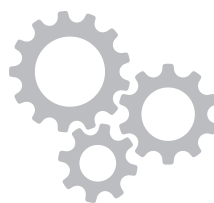
Bleach Capabilities

Most Bleaches have a disinfection time of 30 seconds.

Some Bleach Solutions can be corrosive and cause pitting to metals and some plastics. A pitted surface enables cracks and crevices to harbor germs.

Bleach also is known to have a limited shelf life when diluted.

30 sec.

Bleach Safety

Bleaches are corrosive — which can cause irritation to the skin.

Bleach may cause substantial but temporary eye damage if splashed directly into eyes. It is advisable to avoid prolonged breathing of Bleach vapors. Many products are labeled to wash hands thoroughly after use.

Be cautious when mixing Bleach with other common household chemicals. Chlorine Bleach can react violently with other cleaning products and acids, forming hazardous gases, heat and corrosive materials.

Sustainability Spotlight: Alcohol vs. Bleach

Unlike bleach disinfectant products, which can leave unwanted residues on surfaces if not rinsed properly, PURELL® Surface Disinfectants are approved no-rinse† formulations so you can count on a formulation that's effective against germs while helping promote a culture of sustainability.

VS

PURELL® Professional Multi-Surface Sanitizer & Disinfectant

Consider a reliable product that provides the sanitizing power you deserve, without the wait.

- ☑ Eliminates 99.9% of germs on surfaces, including norovirus, cold & flu viruses, and human coronavirus*
- ☑ No rinse required† on food-contact surfaces
- ☑ No health hazard warning statements required
- ☑ No handwashing required
- ☑ No mixing or dilution steps required
- ☑ No lingering Bleach odor
- ☑ Quick-dry formula

*DIN 02469529 is supported by evidence following drug review demonstrating that it is likely to be effective and may be used against SARS-CoV-2, the coronavirus that causes COVID. Refer to Health Canada list of disinfectants with evidence for use against COVID-19: https://www.canada.ca/en/health-canada/services/drugs-health-products/disinfectants/covid-19/list.html (accessed 2/2/21).
†For surfaces and/or objects that may come into direct contact with children at the mouthing stage of development, a rinse with potable water is recommended.

Purell®

To learn more visit:
www.PURELLSOLUTION.ca