KALIBER CHEMICALS

PRODUCT DATA SHEET

NANO-DISINFECTANT

KILLS 99.99% of BACTERIA, VIRUSES AND FUNGI

Extremely versatile, highly effective, non-toxic, hard surface disinfectant and cleaner.
For use in household, institutional, industrial and agricultural industries.

Health
Neutral pH
Low skin irritation
Low odor

Safety
Low toxicity
No PPE required

Environment
Biodegradable
Non-regulated

Features and Benefits

- Disinfect, sanitizes and prevent the spread of viruses on all hard surfaces in high-traffic facilities such as hospitals, schools, retail stores, hotels, office buildings and other institutions
- Nano-Disinfectant replaces high pH, chlorine-based products and oxidizing disinfectants and is composed of naturally occurring substances to ensure low toxicity, low corrosive, nonflammable and biodegradability
- Extremely versatile in multiple environments
- Kills fungi, mold and mildew
- Low toxicity makes it ideal for commercial kitchens, restaurants, bars and for use in food processing services
- For use on non-critical medical devices, environmental surfaces and inanimate objects in health care facilities, such as hospitals, dental clinics, nursing homes
- The Nano-Disinfectant is a concentrate and must be diluted prior to use. DO NOT USE in concentrated form, read container label prior to use and store according to instructions to ensure long lasting effectiveness

Other Industries

- Agriculture: Disinfection of animal housing areas, farm vehicles and any other equipment that is sensitive to microbial contamination.
- Oil & Gas: A safe and biodegradable alternative to biocides currently used for treating produced/flowback water, managing bacteria, or preventing microbial induced corrosion, Ability to replace chemicals currently used including sodium hypochlorite (bleach), sodium permanganate, chlorine dioxide, hydrogen peroxide, and ozone.
- Water Reclamation: A chlorine-based product that is effectively used as a disinfectant for water treatment.

Attributes of Common Hard Surface Disinfectants

	Nano-Disinfectant	Sodium Hypochloride (Bleach)	Isopropyl Alcohol	Glutaraldehyde	Hydrogen Peroxide
Kills Bacteria	✔	✔	✔	✔	✔
Neutral pH	✔				
Low Toxicity	✔				
Enviro-Friendly	✔				
Ready to Use	✔	✔	✔		✔
Non-Toxic	✔				
No PPE required	✔				
Easy Disposal	✔				✔
Non-Flammable	✔	✔		✔	✔

Known to be effective on the following

Bacteria
E. Coli
P. Aeruginosa
S. Aureus
S. Pneaumoniae
B. Anthracis (Anthrax)
B. Cereus
S. Typhimurium
S. Enterica
C. Perfringens spores
Coliphage MS2
K. Terrigena
L. Pneumophila
L. Monocytogenes
Y. Pestis (plague)
M. Bovis (TB)

Viruses
Influenza A (H1N1 Virus)
Hepatitis A
Hepatitis B
Hepatitis C (Bovine)
HIV – 1
Norovirus
Canine Distemper Virus
Canine Parvovirus
Norovirus (Feline)
Vaccinia virus (smallpox)

Fungi
S. Chartartum (black mold)
T. Interdigitale (ringworm)
Candida Albicans
Candida Aureus
Club Root Spores
Aspergillus Brasillensis

Micro-Organisms
Giardia Lamblia Cyst
Giardia Muris Cyst
C. Parvum Cyst

FREQUENTLY ASKED QUENTIONS (FAQ'S):

What is Nano-Disinfectant?

- Nano-Disinfectant is a solution that contains two forms of available chlorine ions, the highly effective hypochlorous ion (HCLO-) and hypochlorite ion (OCL-) which are known to be very efficient at killing various pathogens.

How is Nano-Disinfectant made?

- The process begins with a concentrated NaCl salt solution. Negative (anode) and positive (cathode) electrodes are placed in the salt solution and a voltage is applied to the system. The HCLO- and CLO- ions are drawn through a semi-permeable membrane and accumulate at the positive electrode (called the anolyte). NaOH ions are drawn to the negative anode and accumulate there (called catholyte). The anolyte is used as a disinfectant/sanitizer and the catholyte is used as a degreaser.

Is the Nano-Disinfectant dangerous?

- No, the active ingredient is the same chemistry our body immune system produces to fend off bacteria. The disinfectant is highly concentrated and the fluid has a neutral pH thus is not acidic or caustic.

How long does the contact time need to be?

- After application, the surface must be wetted for 10 minutes to allow complete disinfection.

Can I use the disinfectant on all surfaces?

- The disinfectant is marketed as a "Hard Surface Disinfectant". This includes any non-porous material such as children's toys, countertops, cutting boards (plastic or other non-porous materials) doorknobs and handles, floors, walls, practically anything that is touched by humans or animals.

Will I need to rinse these surfaces with potable water after disinfecting?

- As determined by Health Canada, the surface must be rinsed after the 10-minute elapsed time is up. The residue from dried Nano-Disinfectant is ordinary NaCl salt water.

Can I use the concentrated version of the product?

- No, the Nano-Disinfectant must be used diluted. Health Canada has dictated that the maximum dilution is 1 liter + 9 liter of water for hard surface disinfecting.

Does Nano-Disinfectant degrade like Bleach?

- The Nano-Disinfectant will lose approximately 4 ppm concentration per day. Therefore, the fluid should be used immediately after dilution (or within a maximum of one week of dilution) to ensure complete disinfection of surfaces.

Can the Nano-Disinfectant be used in Hospitals?

- Yes, the Nano-Disinfectant can be used to clean hard non-porous surfaces in hospitals such as door handles, countertops as so forth. This product is not authorized to be used as a sterilant/high-level disinfectant on any device or instrument that is introduced directly into the human body or has contact with mucous membranes. (e.g. eyes and mouth).

How does Nano-Disinfectant compare to Bleach?

- The Nano-Disinfectant is directly comparable to Bleach without having the caustic or hazardous designations.