



## **PureGreen24 Disinfectant Q&A**

### **1. What is the difference between a Disinfectant and a Sanitizer?**

There is a general misunderstanding by the consuming public as to the difference between a disinfectant and a sanitizer; the perception being that they are equally effective. Factually sanitizers only kill a percentage of viruses and bacteria (99.99% often advertised) while a disinfectant kills 100%. Sanitizers are therefore only effective at reducing the number of organisms present on a surface, leaving the remaining organisms to quickly reproduce after the sanitizer's application. Furthermore, the organisms that remain after the application of a sanitizer may become resistant to future sanitizing treatments thereby reducing the effectiveness of a sanitizer after repeated applications. PureGreen24 not only kills 100% of bacteria, it also does not introduce bacterial resistance resulting in PureGreen24 having unlimited long term effectiveness.

### **2. Why do organisms NOT build up a resistance to PureGreen24 when they do with other sanitizers and disinfectants?**

PureGreen24 takes no prisoners! SDC, the active ingredient of PureGreen24, kills microorganisms by two modes of action: 1) the silver ion deactivates structural and metabolic membrane proteins leading to microbial death; 2) the microbes view SDC as a food source, allowing the silver ion to enter the microbe. Once inside the organism, the silver ion denatures the DNA, which halts the microbe's ability to replicate and leads to its death. By totally killing the organisms there is no chance for them to build up a future resistance to SDC.

### **3. What are germs?**

Germs are microscopic organisms or agents. There are four major types of germs: bacteria, viruses, fungi, and protozoa. Hard surfaces located in public areas are breeding grounds for germs. When a person's hand

touches these surfaces, then touches their eyes, nose or mouth infection may occur. As a result of an infection cells in the body can be damaged causing disease. PureGreen24 is proven to kill many germs in 30 Seconds\* thereby avoiding infection and disease.

#### **4. Why EPA registration?**

The U.S. Environmental Protection Agency (EPA) treats disinfectants as pesticides and requires all disinfectants to be registered with the US EPA for sale in the United States. In addition, disinfectants must be registered in each state where the product is sold. PureGreen24 EPA registration number is 72977-3-84364, and is registered in all 50 states and the Commonwealth of Puerto Rico.

#### **5. Why is using an EPA Category IV, that of PureGreen24, important versus the Toxic Category II rating of the leading brands?**

The EPA does not require warnings for Category IV products but does have serious warnings for Category II Products. Category II products must be labeled with the following warnings: May be fatal if absorbed through skin, May be fatal if inhaled, Causes substantial but temporary eye injury and causes skin irritation. For more information about EPA toxicity ratings visit the EPA web site: Label Review Manual Chapter 7: Precautionary Statements.

#### **6. How does PureGreen24 Deodorize?**

Deodorizing is a byproduct of PureGreen24's ability to kill odor causing bacteria a major source of unpleasant odors.

#### **7. What are MRSA and VRE?**

Methicillin-resistant Staphylococcus aureus (MRSA or Staph) and Vancomycin-resistant Enterococcus (VRE) are two of the most widespread antibiotic-resistant pathogens that cause hospital/ public facility- acquired infections. Unfortunately, in recent times, these infections have also led to the deaths of both young and old alike. PureGreen24 is effective against VRE and strains of MRSA including CA-MRSA (community-associated MRSA) and PVL-MRSA (Panton - Valentine Leukocidin MRSA). PVL is a toxin, which destroys white blood cells, and can kill within 24 hours of reaching the lungs.

## **8. Where is PureGreen24 Manufactured and Bottled?**

PureGreen24 is manufactured and bottled by PURE Bioscience in a suburb of San Diego, CA. PURE Bioscience's manufacturing facilities are Current Good Manufacturing Practice (cGMP) certified for the production of pharmaceutical-grade SDC. cGMP (also referred to as 'GMP') is a term that is recognized worldwide for the control and management of manufacturing and quality control testing of foods and pharmaceutical products.

## **9. What are Fungicides and Virucides?**

Fungicides kill fungus, and virucides kill viruses. PureGreen24 is both a Fungicide and Virucide\*.

## **10. What is the difference between a Bacteria and a Virus?**

Viruses are tiny infectious agents that can only reproduce inside a living cell. Outside of a living cell, a virus is dormant, but once inside; it takes over the resources of the host cell and begins the production of more virus particles. As an example, Herpes is a virus. Bacteria are one-celled living organisms. Bacteria are many times larger than viruses. All bacteria are surrounded by a cell wall. They can reproduce independently, and inhabit virtually every environment on earth, including soil, water, hot springs, ice packs, and the bodies of plants and animals. As an example, Staph is a bacterium

## **11. Does PureGreen24 need to be mixed?**

PureGreen24 is a ready to use formula for consistent efficacy every time. No mixing required

## **12. Can I use PureGreen24 on children's toys, in the presence of humans or in pet's/ livestock's living areas?**

# On children's toys and play surfaces. No wiping required. - Yes!

# On sports equipment (helmets and pads). No wiping required. – Yes!

# In the presence of humans or animals - Yes!

# In pet's/ livestock's living areas – Yes!

## **13. How often should PureGreen24 be applied?**

It is recommended that PureGreen24 be applied after the surface is cleaned or at least once per day. Following cleaning, the residual

disinfectant properties of PureGreen24 cease (be mindful that most disinfectants have little to no residual disinfectant properties after they are applied). In the case of sports equipment and young children's toys or equipment, is it recommended that PureGreen24 be applied after or before each use. Microfiber cloths are recommended for the application of PureGreen24

#### **14. Why Does PureGreen24 cost more than bleach?**

PureGreen24's technology has no comparison to the active ingredient in the disinfectant your mother's mother used. PureGreen24's primary active ingredients are based on a revolutionary new silver ion technology made via a patented process. This technology delivers an unparalleled combination of effectiveness and safety not found in any other disinfectant. PureGreen24 is also manufactured and bottled in the USA with the highest quality standards in a Good Manufacturing Practice (GMP) certified state of the art facility.

#### **15. Is PureGreen24 a cleaner?**

PureGreen24 will clean up water soluble spills such as juice, but is not formulated to clean up greasy messes. If a surface needs to be cleaned; a cleaning product should be applied first followed by PureGreen24 applied as a final disinfecting step. When PureGreen24 is applied with a Microfiber cloth you will now be cleaning while you are disinfecting.

#### **16. Does PureGreen24 contain hazardous chemicals?**

None of the chemicals in PureGreen24 are considered hazardous by OSHA

#### **17. Does PureGreen24 meet Clean Air and Water Act standards?**

- Per the Clean Air Act, PureGreen24 does not contain any hazardous air pollutants, Class 1 Ozone depletors, or Class 2 Ozone depletors.
- None of the chemicals in PureGreen24 are listed as Hazardous Substances under the Clean Water Act (CWA), Priority Pollutants under the CWA, or Toxic Pollutants under the CWA.

#### **18. Does PureGreen24 stain or damage fabric?**

PureGreen24 is not intended for use on fabrics, however, unlike most

disinfectants; PureGreen24 is colorless and will not stain or damage fabrics if contact occurs.

### **19. Are Botanical based Sanitizers as effective as PureGreen24?**

Beware of products that claim only 99.99% effectiveness. It is important to use a product that is 100% effective (see sanitizer vs. disinfectant answer). Furthermore, many of the so called botanical based product's active ingredients are toxic substances. An example of a botanical ingredient is thyme; from which Phenol, a toxic substance, is extracted. Therefore when selecting a disinfecting product it is important to ensure that there is 100% effectiveness combined with low toxicity. PureGreen24 delivers on both of these requirements.

### **20. How does PureGreen24 work for 24 hours when other disinfectants and sanitizers do not?**

View videos on our website about how PureGreen24's active ingredient SDC works.

### **21. What makes PureGreen24 'Green'?**

- PureGreen24 is manufactured from silver ions and citric acid, both of which occur naturally in the environment
- 99.967% (by weight) is composed of renewable raw materials (water and citric acid)
- The manufacturing process produces zero discharge with no waste or byproducts.

### **22. Can I use any bottle to apply PureGreen24?**

It is important that PureGreen24 be stored only in opaque bottles (not transparent or translucent) due to the photo sensitivity of silver

### **23. How far will my PureGreen24 go?**

A 32oz bottle will disinfect approximately 900 square feet.

### **24. Why Use PureGreen24 vs. Bleach + Water?**

There are many steps that must be closely followed with using a bleach and water dilution; with the first step being the mixing. This is a hazardous task that is often performed incorrectly. The EPA only recognizes a MRSA kill claim from professional grade bleaches such as Ultra Clorox Germicidal

Bleach (standard Clorox bleach is not EPA rated to kill MRSA). As per Clorox, the concentration of the bleach to water must be 2400ppm (or 5.33 oz of bleach per gallon of water). Once the correct bleach is mixed in the correct proportion, it must be applied by professionals using protective gear, allowed to soak for 2 minutes, and then rinsed. Often times, the soak time is too short or the toxic bleach/water mixture is not properly rinsed. Then, the general area must be allowed to “air out” prior to humans/ pets entering the space. Of course bleach is well known to stain and damage fabrics and other materials; so be prepared for collateral damage resulting from the application process. Then, do not forget to dispose of the leftover bleach/ water mix as it loses effectiveness over time (as short as 24 hours). Most likely, the disposal of the remainder is not performed in an environmentally friendly way (unused bleach-water is generally pored down the sink). It should be noted that even if all these steps are closely followed, the bleach/ water mix does not have an EPA kill claim for CA-MRSA.

Puregreen24 has none of these disadvantages. There is no mixing, PureGreen24 has an EPA IV toxicity rating which is the lowest rating assigned by the Federal EPA; so no protective gear is required, no need to rinse, it does not damage fabrics or other materials, it maybe applied in the presence of humans and animals, and there is no wasted PureGreen24. Plus, PureGreen24 has the following advantages which include: its active ingredient, SDC, being EPA registered to kill CA-MRSA, offers a 24hr residual bacterial kill, and is a green, environmentally and human friendly product.

**25. Is there independent test data that proves PureGreen24’s claims?**

Yes, independent test data is available upon request: Send an email to [GregCantrell@PureGreenSolutions.net](mailto:GregCantrell@PureGreenSolutions.net) requesting this information. Please include your full contact details.

**26. What is the shelf life of PureGreen24?**

There is no date coding of PureGreen24. The shelf life of PureGreen24 is the range of 12-18 months.

**27. Is PureGreen24 listed on the EPA list of Registered Products Effective Against Methicillin Resistant Staphylococcus aureus**

**(MRSA) [www.epa.gov/oppad001/list\\_h\\_mrsa\\_vre.pdf](http://www.epa.gov/oppad001/list_h_mrsa_vre.pdf) ?**

Yes, PureGreen24 is the only green, EPA category IV, MRSA killing disinfectant listed. PureGreen24 is identified on the EPA list via the product name AXEN 30; EPA registration 72977.

**28. ¿Están las instrucciones de la aplicación disponibles en español? (Are application instructions available in Spanish?)**

Yes there are application instructions in español. English application instructions are included in the PureGreen24 Factsheet.

**29. What range of temperatures can PureGreen24 be stored?**

PureGreen24 continues to be effective after being exposed to temperature ranging between 0-100C (-32F – 212F). It is recommended however that PureGreen24 be stored under normal office/ household conditions. Freezing of the product may result in damage to the packaging during transit and should be avoid if possible.

**30. Is PureGreen24 Fragrance-Free?**

Yes, PureGreen24 is Fragrance-Free. There are no fragrances added to PureGreen24, and PureGreen24 is effectively odorless. Please note that if you apply PureGreen24 to surfaces that have been previously disinfected with other products there may be residual odors due to the re-hydration of these prior use products. These odors, following the application of PureGreen24, will dissipate after the first few uses of PureGreen24.

**31. Is PureGreen24 available in Canada and Commonwealth of Puerto Rico?**

PureGreen24 is available in Canada and Commonwealth of Puerto Rico.

**32. Does PureGreen24 require precautionary Warning labeling such as “Hazards to Humans and Domestic Animals - Danger”?**

No, PureGreen24, unlike almost all other disinfectants, does not require Warning labeling.

**33. Is PureGreen24 Registered in all 50 United States?**

Yes, PureGreen24 is registered in all 50 States.

**34. Who is using PureGreen24?**

A long list of our current customers are currently using PureGreen24 and experiencing great results!

**35. Why use a Microfiber cloth instead of a cotton rag or paper towel?**

Microfiber has many inherent benefits over cotton, are recommended for the application of PureGreen24.

**36. What are the application instructions when using a Microfiber cloth?**

Microfiber cloths are recommended for the application of PureGreen24. Simply “spray and wipe” surfaces to be disinfected. Ensure all surfaces are completely soaked, then wipe off excess. For irregularly shaped surfaces like children’s toys, door knobs or bedrails, spray PureGreen24 on the microfiber cloth until a portion of the cloth is damp, then wipe the desired surface. The microfiber cloth will clean the surface while you are disinfecting.