1. **What is unique about the 3M™ General Purpose Cleaners cum Disinfectant Solution?**
   The 3M™ General Purpose Cleaners cum Disinfectant Solution is a concentrated product, Cleans, disinfects, and deodorizes in one step. kills microbes that include viruses, bacteria, fungi from hard non-porous surfaces. The 3M™ General Purpose Cleaners cum Disinfectant Solution P2 is effective against Coronavirus (COVID-19) manufactured at 3M Plant as per local regulations with the government FDA license.

2. **How much the 3M™ General Purpose Cleaners cum Disinfectant Solution effective against coronavirus?**
   The 3M™ General Purpose Cleaners cum Disinfectant Solution Kills Coronavirus 99,997% tested as per ASTM E1053 in accordance with the US. EPA product performance test guidelines. It tested in presence of soil at a 1:100 dilution ratio with water.

3. **What type of microbes does this 3M™ General Purpose Cleaners cum Disinfectant Solution kills?**
   The 3M™ General Purpose Cleaners cum Disinfectant Solution tested at 3rd party govt. approved labs. Tested in presence of soil at 1:100 dilution ratio with water.

Test Microbe	**Kill claim**
Human coronavirus 229E ATCC VR740	99.997%*
Pseudomonas aeruginosa gram-negative bacteria	99.999%**
Escherichia coli gram-negative bacteria	99.999%**
Staphylococcus aureus gram-positive bacteria	99.999%**
Enterobacter hirae gram-positive bacteria	99.999%**
Candida albicans (Fungi)	99.999%**

4. **How to select disinfectant based on pH value?**
   As we aware pH scale 1 to 6 acidic range, 6 to 8 neutral range and, 8 to 14 alkaline range. Generally acidic solution corrodes metallic surfaces and high alkaline damage surface like fabric, plastic, etc. along with skin irritations. It advises to use a product in neutral range, to identify product pH please check product label or MSDS.

5. **Do I need to wash my hands after using the 3M™ General Purpose Cleaners cum Disinfectant Solution?**
   As with any cleaning process, it is recommended to wash your hands for at least 20 seconds thoroughly with soap and water after performing cleaning, disinfecting, or processes relating to facility maintenance tasks.

6. What is the difference between a “sanitizer” and a “disinfectant”?

   The US EPA Performance Standard for sanitizers requires the results should demonstrate a reduction of ≥99.9% (3-log10 reduction) in the number of each test microorganism over the parallel control count within 5 minutes. The “Sanitizer” claims are based on laboratory testing of two bacterial pathogens. These are Staphylococcus aureus and either Klebsiella pneumoniae or Enterobacter aerogenes.

   The US EPA Performance Standard for disinfection are subject to more rigorous EPA testing requirements and must clear a higher bar for effectiveness than surface sanitizing products. Disinfectants efficacy can vary based on tested pathogens (claims can range from disinfectant against the virus, bacteria, and fungus, etc.), in general results should demonstrate a reduction of ≥99.999% (5-log10 reduction).

7. What is Cleaner cum Disinfectant?

   In general, the solution works as a cleaner and disinfectant at the same time in other words It cleans plus kills microbes in one step. General hypochlorite or hydrogen peroxide-based, or other disinfect solution works as anti-microbial only. Means it will kill microbes only when the surface is free from soil or dirt, work on clean, dirt-free conditions for this type of disinfectant you need to adopt two-step process first thorough cleaning followed by disinfection. When supplier or manufacturer claims, “Cleaner cum Disinfectant” in one step, it means its microbial efficacy test is performed in the presence of organic soil load, typically 5% bovine serum. 3M™ General Purpose Cleaners cum Disinfectant Solution qualify for cleaner cum disinfectant one-step process.

8. Will high-temperature applications, like automizer, steamer, or fogging application affect the disinfectant solution performance?

   Yes, as we know general hypochlorite or hydrogen peroxide-based, silver oxide and other disinfectant solutions are degrading at high temperature as well as pressure. This type of disinfectant is not suitable for such applications. Please check product stability temperature with supplier or manufacturer or take expert advice. Few Quat amine solutions with right co-surfactant works at high temperature and showing improving its efficacy with rising in temperature, please more details from supplier or manufacturer or take expert advice.

9. Will water hardness affect the disinfectant solution performance?

   Yes, as we know general hypochlorite or hydrogen peroxide-based, silver oxide, anions based, and other disinfectant solution are not compatible with water hardness elements like calcium Ca++ and Mg++ ions. This type of disinfectant is not suitable for hard water dilution. Please check product stability with hard water from the supplier or manufacturer. Few Quat amine, CHG, PHMB solutions with the right co-surfactant works with hard water dilutions.

10. What is the shelf life of diluted disinfectant solution?

The shelf life of a diluted solution determines how long the diluted solution active contain stays stable in a range of +/- 5%. For example, if we are using 0.1% diluted hypochlorite solution, when tested it active must remain in the range of 0.95% to 0.105%. Typically, the shelf life of diluted disinfectant solutions ranges from few minutes to a week. All diluted disinfectant solutions have a minimum shelf life. For example, general hypochlorite or hydrogen peroxide-based diluted disinfect solution will have a shelf life of few hours, and Quat amine solutions may have a shelf life of up to a week or month. 3M™ General Purpose Cleaners cum Disinfectant Solution qualify for a cleaner diluted solution have shelf life of 1 month.

11. What is the user concentration for surface disinfectant?

Please go through the user instruction or application SOP given or declared on the product packaging label; information provided by the supplier or manufacturer. There are several dilution ratio examples as follows

1:100 dilution in water means 1 ml of surface disinfectant solution in 99 ml of water.

Use one capful or ½ cap (typically 5 ml to 25 ml range) of surface disinfectant solution in half a bucket of water or 4 liters of water.

Ready to use or use undiluted

There can be multiple dilution instructions, for example for kitchen surface use undiluted, for floor use diluted.

Critical information we need to check at what dilution rate product kill rate claimed only at this or above dilution ratio solution work as antimicrobial.

12. How to verify claims on the label? How critical is it?

The user concentration of the solution is very critical information to meet the product claims or performance as declared on the label. Please go through claims in detail. Especially for anti-microbial, germicidal, virucidal, or bactericidal claims with a kill rate like 99% to 99.99% declared on label followed by special notations and marks like *, # or +, etc., or conditions that apply. These special notation claims are explained at the bottom or corner of the label. It is a mandatory information supplier or manufacturer must declare on the label as per guidelines. Some examples of these conditions are as follows.

a. If declared “Based on Lab test” or “3rd party test when tested product **undiluted**” – THIS INFORMATION CAN BE MISLEADING IF THE PRODUCT LABEL RECOMMENDS USER TO DILUTE IT. WHEN DILUTED, THE PRODUCT MAY NOT MEET PERFORMACE CLAIMS DECLARED ON THE PRODUCT LABEL.
b. If declared “As per standard testing protocol” - THIS INFORMATION CAN BE MISLEADING SINCE TEST CONCENTRATION NOT DECLARED. In such cases, it is advisable to connect with the manufacturer and get information more information on the dilution ratio at which the product meets performance claims.
c. If declared “tested at minimum recommended concentration”. THESE TYPE OF CLAIMS ARE BEST SUITED TO MEET THE PRODUCT PERFORMANCE AS CLAIMED ON THE LABEL.

13. Why do we need to verify the product's regulated license number?

Due to COVID-19 and the sudden surge for surface disinfectant solutions, many nonregulated products are available in the market. It is highly recommended for the end-user to request a valid copy of the license from the supplier or manufacturer. Licensed products are always governed and controlled by regulators with the highest standard of quality assurance, assuring the user of a quality product.

14. Is Coronavirus Disease 2019 (COVID-19) the same as Human Coronavirus?

No. These two pathogens come from the same family of viruses, but the two strains are different species. This is like how both chimpanzees and gorillas are different animals, but both part of the Hominidae or the great ape family. However, the US EPA has determined that disinfectants with a preexisting efficacy claim for Human Coronavirus meet the criteria as defined by the US EPA's Emerging Pathogen Policy, thus are included on US EPA's "List N" for effectiveness against COVID-19. Please reference the US EPA's "List N" for more detail. https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2

3M™ General Purpose Cleaners cum Disinfectant Solution is tested for Human coronavirus 229E ATCC VR740, Kills ≥ 99,997% as per ASTM E1053 in accordance with US. EPA product performance test guidelines.

15. Is US EPA's "List N" applicable for the product manufactured in India?

No. US EPA's "List N" is basically applicable for Disinfectants manufactured in the USA only. Most of the countries have their own local governing regulator or body. In India its Food & Drugs Administration comes under the provision of DRUGS & COSMETICS ACT 1940 & RULES govt of India.

Note: Since 3M™ General Purpose Cleaners cum Disinfectant Solution manufactured in India its does not list under List N of EPA, similar product manufactured in 3M USA comes under List N.

3M™ General Purpose Cleaners cum Disinfectant Solution manufactured in India is tested for Human coronavirus 229E ATCC VR740, in accordance with US. EPA product performance test guidelines. It will best alternative for Indian customer looking for US EPA's "List N" product.

16. Can we demand FDA and Product test certification from suppliers or Manufacturers?

Yes, it always recommended to cross-check certificates and test reports to understand product performance, tested organization authenticity like approved EPA lab, test final report.

Especially when your certifying or giving assurance certificate to end-user and end customer after disinfecting treatment. To build confidence and trust of the user and end customer.

17. Will Disinfecting high touchpoints and floors will help?

Disinfecting high-touch surfaces and floors are among several ways to help mitigate the spread of viruses. Many studies have discovered that pathogens inoculated on a floor migrate to other locations in a room, including high touch surfaces. Wheelchairs, handbags, backpacks, mobile phones, and cords are everyday items that touch the floor and eventually lead to the transition to high-touch surfaces.

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