This document was drafted to help answer many FAQ's and to clarify a few facts regarding the role of the CDC, EPA, and FDA as it relates to disinfectants and hand sanitizers used to fight COVID-19.

What the CDC is and is not: The CDC is a federal agency that's sole purpose is the focus and safeguarding of human health. This agency offers suggestions and suggested measures as it relates to facility disinfection, hand sanitizing, and safety. I emphasize the word "suggests" because the CDC **is not** a regulatory agency nor an authority of any kind as it relates to these products or their use. The CDC is a great resource, but they are often viewed or confused as somewhat of a totalitarian agency. This is likely due to their positive public perception. https://www.cdc.gov/infectioncontrol/guidelines/disinfection/disinfection-methods/regulatory-framework.html

Role of the EPA: The EPA however **IS** the governing agency that regulates disinfectant products sold and used throughout the U.S. It is their job to validate claims made by the manufacturers and to provide an EPA registration number prior to the products being marketed. Additionally, the EPA is responsible for the Emerging Pathogen Policy that most of us are adhering to today pertaining to the proper selection and use of disinfectants to fight COVID-19. Beyond suggestive, the EPA has strict guidelines in place and offers the science and validation behind their claims and suggestions.

Role of the FDA: The FDA is the governing agency that regulates, validates, and promotes the safe use of the products and chemicals that are used in or on the human body, medical devices, pharmaceuticals, among many other categories, important roles, and functions. It is the FDA that regulates and validates hand sanitizers and hand soaps. Due to advancements in technology, formularies, and the widespread use of hand sanitizers, the FDA is in the process of retesting and updating its information / criteria as it pertains to the effectiveness and safety of different formulas. The FDA does not have a strong position on hand sanitizers or their use. https://www.fda.gov/drugs/information-drug-class/topical-antiseptic-products-hand-sanitizers-and-antibacterial-soaps

Do I have to use an alcohol based hand sanitizer? The short answer is no. The CDC does specifically "recommend" the use of an alcohol-based hand sanitizer **IF** soap and water are not readily available. This does not negate or imply that non-alcohol formulas are not effective. On the contrary they are highly effective and offer many additional benefits not found in alcohol formulas. As mentioned, it is the FDA who validates these products not the CDC. To date, the FDA is relying on the manufacturers to perform their own testing and provide efficacy data. The FDA has determined that more studies are needed because there is too much inconclusive information regarding the use and effectiveness of hand sanitizers (all forms) and continues to promote hand washing vs sanitizing. There are only 3 active ingredients that the FDA is deferring for further testing. That is Benzalkonium Chloride (most non-alcohol formulas including DEB brand), isopropyl alcohol, and ethyl alcohol based sanitizers. 28 other ingredients have been dismissed from further testing from the 2016 ruling. Full FDA Rulings on hand sanitizers below. https://www.federalregister.gov/documents/2019/04/12/2019-06791/safety-and-effectiveness-of-consumer-antiseptic-rubs-topical-antimicrobial-drug-products-for

My disinfectant says I need PPE to use it. Should I be concerned? All disinfectants are considered pesticides. Although they are the mildest in that category, they are still subjected to certain verbiage that the EPA requires. There is no exception to this regardless of how mild or "safe" a disinfectant may be. The pesticide classification is what dictates the warnings. Federal law states the following must be printed on the SDS sheets and / or bottle labels. There is additional information on the manufacturers SDS sheets that will help you determine the severity of risk when using the product. SDS section 8 Exposure Controls, Section 9 Physical Properties, Section 10 Reactivity, and Section 11 Toxicology Information. For a quick reference you can also refer to the HMIS or NFPA rating scales that is located on most SDS sheets. https://www.epa.gov/pesticide-registration/prn-2000-5-guidance-mandatory-and-advisory-labeling-statements

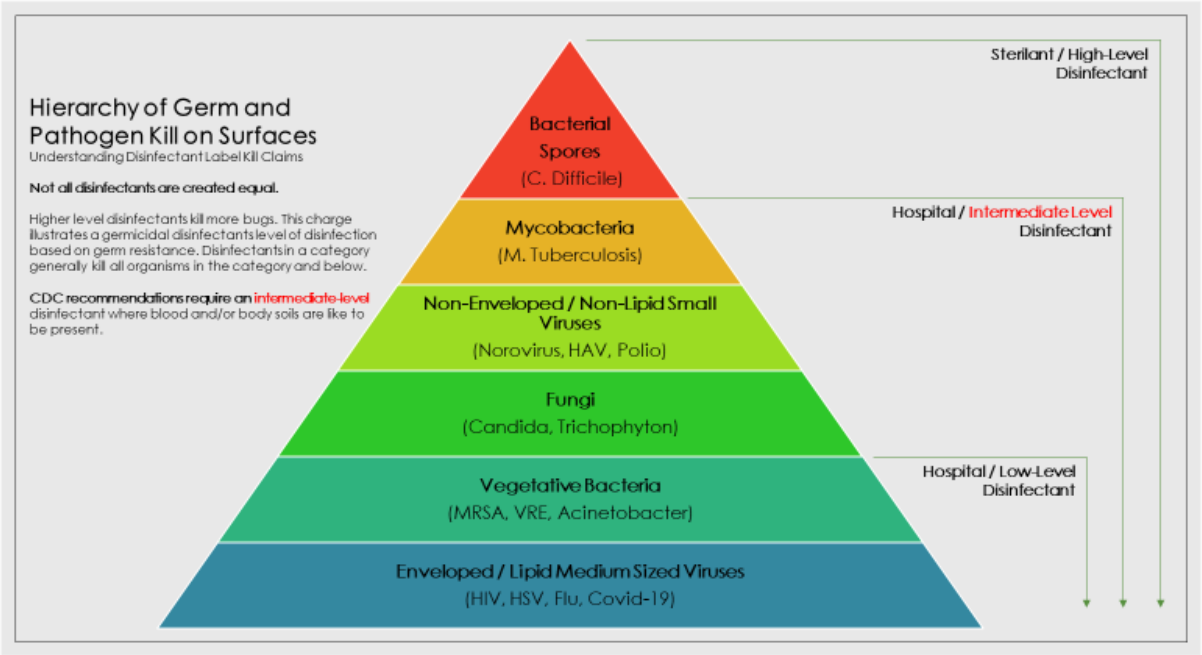
Mandated Disinfectant / Pesticide Labeling Requirements Example:

FIFRA: This product is a U.S. EPA Registered pesticide, EPA Reg. No. 47371-129-8155, and is **subject to certain labeling requirements under Federal pesticide law**. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide products. The hazard information required on the pesticide label is reproduced here.

DANGER: Corrosive. Causes irreversible eye damage and skin burns. Do not get in eyes, on skin or on clothing. Wear goggles or face shield, protective clothing and rubber gloves. Harmful if swallowed and/or absorbed through the skin. Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco. Remove contaminated clothing and wash clothing before reuse. The pesticide label also includes other important information, including directions for use.

OSHA: Regulates all PPE in the workplace for both medical and non-medical environments. The CDC does not have any recommendations nor endorses any PPE protocols. https://www.cdc.gov/coronavirus/2019-ncov/hcp/non-us-settings/emergency-considerations-ppe.html

What disinfectant(s) can I use to kill COVID-19 and why isn't the claim on the bottle or data sheet? Because COVID-19 is a new pathogen, there has not been sufficient time for manufacturers to submit, and the EPA to validate, any disinfectants for use against COVID-19. However, the EPA developed an Emerging Pathogen Policy for this exact reason in 2016. The EPA identified the family type that the Coronavirus falls into. It is an Enveloped Virus. The good news is enveloped viruses are the most susceptible to disinfection. The EPA policy states that a registered disinfectant that has proven efficacy against a much harder to kill non-enveloped virus should be effective against COVID-19. There are far more registered disinfectants on the market currently that meet this criteria / policy than those that do not. Below is a graph (pyramid) that illustrates the hierarchy of disinfection. Most of the disinfectants we sell including 891, 892 Arena, Husky 814, Husky 824 Quick Care, Husky 9080, 3M #25 HB Qaut, 3M #40 RCT, and many others fall into the " Intermediate Level below". Note that COVID-19 is in the very first (most susceptible) category. Emerging Viral Pathogen Program Guidance (PDF)



COVID-19 Disinfection Processes and Procedures – Sources include; CDC, EPA, WHO

***The Coronavirus (COVID-19)** is a small enveloped virus. This type of virus is the most susceptible to disinfection / most easily killed vs all other pathogen forms.

***The EPA developed an Emerging Pathogen Policy** in 2016 in order to offer direction when a new pathogen has emerged, and no formal testing has taken place. As it pertains to COVID-19, the policy states an EPA registered disinfectant with proven efficacy against a non-enveloped virus should be used. Examples of non-enveloped viruses are Adenovirus, Norovirus, Rhinovirus, and several others. A few products we have on hand that meet the EPA's Pathogen Policy include 3M #25, 15, 40, Husky 814, 824, 891, 892, and a multitude of others.

***Often overlooked** is the procedure, process, and / or delivery method of the disinfection product to the surface(s). This is equally if not more important than the chemical itself. Why so important? We are introducing an insecticide to an environment occupied by people. If we are going to do this, it is essential that we are receiving the desired results. If not, all we have accomplished is introducing a known toxic to the environment without benefit. Methods include traditional spray and wiping, pre-charging microfiber cloths, electrostatic spraying, and fogging. Proper dwell time, pre-cleaning (if required), type of environment, type of surfaces, electronic equipment, occupied spaces, and many other factors should be considered prior to choosing the appropriate method(s), product, and delivery system.

***Should I fog an environment?** Studies show that this can be an effective delivery method if the following conditions are met. 1. The space is not larger than 12,000 cubic feet. The reason for the open space limitations is because the delivery device needs to be able to fill the area with a dense fog for a predetermined amount of time to reach efficacy. To date, we are unaware of a machine that can deliver fog at a higher rate to be effective in larger open spaces. 2. HVAC systems can be controlled or blocked in the space. 3. Sensitive materials and / or equipment can be protected. 4. The product used is EPA registered and was tested specifically for fogging applications. Testing efficacy from a wet liquid on a surface is dramatically different than that of fogging.

***The use of Electrostatic spray** devices are a newer technology. This type of machine eliminates common issues associated with fogging and spray and wipe methods of disinfection. These work by positively charging the liquid droplets as they are expelled from the sprayer. This charge acts like a magnet when introduced to a negatively charged surface. The benefits are: A faster delivery system, better surface adhesion, faster application, less product / disinfectant required, less chemical exposure, and the droplets can wrap around surfaces otherwise not possible with other methods.

***In summary:** Each facility and business model are unique and may present challenges specific to that facility / business. There are a multitude of things to consider prior to implementing a new cleaning / sanitation protocol. We must first determine the of levels of "clean" or levels of "disinfection" desired, the training process, when to implement, repeatability, continuity, etc. Typically an in person meeting(s) and site visit will be the quickest and easiest way to start the process.