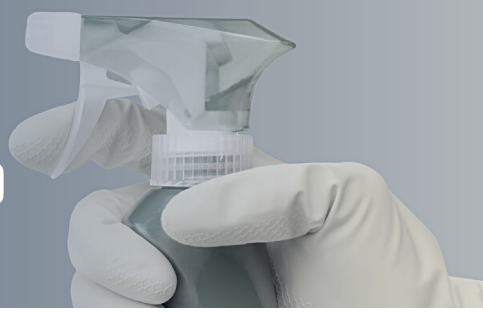
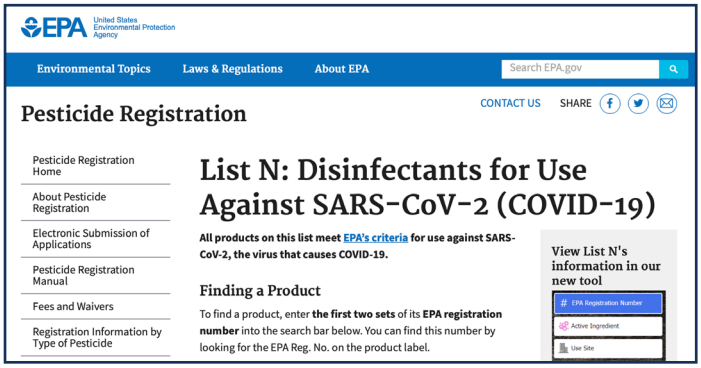
Disinfectant

Steps to Determine if Kills COVID-19 While Keeping Employees Safe

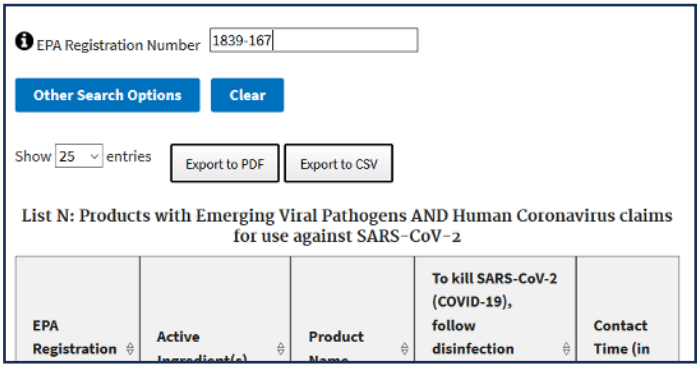


1. Find the EPA registration number (EPA Reg. No. with typically two to three sets of numbers.) on the back of the product typically at the end of the label.

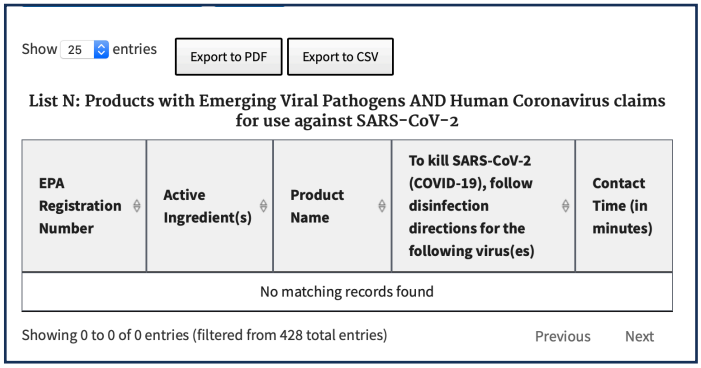
2. Open EPA Website: https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2-covid-19



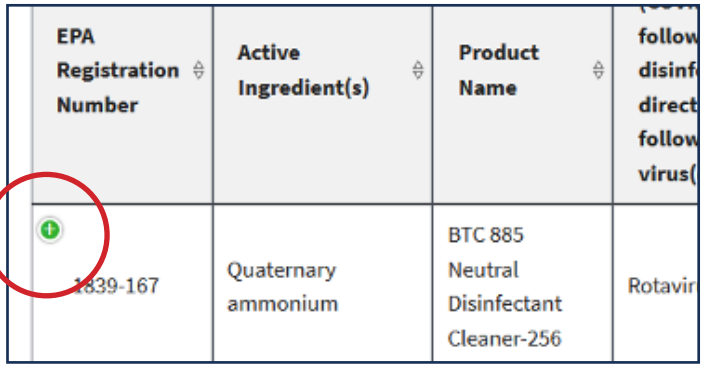
3. Type in the EPA# in the middle of the webpage.



4. The site will automatically bring up the disinfectant if it can be used for COVID-19. If there are no results, it is not effective for COVID-19.



5. If you click the green plus symbol, it provides additional information about the product.



6. Search the web for the product name and the Safety Data Sheet (SDS).

7. Review the following:

a. hazard(s) identification
b. First-aid measures
c. Handling and storage
d. Accidental release measures
e. PPE

Reference the CDC/NIOSH Hazard Communication for Disinfectants Used Against Viruses: https://www.cdc.gov/niosh/topics/disinfectant/default.html?deliveryName=USCDC_10_1-DM35464

8. Consider all Pros and Cons

Item to Review	Pro	Con
Active Ingredient		• Phenolic- small changes in dilution causes large differences in effectiveness, residual film can be reactivated by adding moisture, a detergent my neutralize, do not use with hard water • Chlorine Hypochlorite (bleach) – will not disinfect if organic material is present, UV light breaks down, needs to be made daily, repeat use will make plastic brittle and discolor and corrode metal • Hydrogen peroxide – will harm metal over time, damages rubber and plastic • Glutaraldehyde – OSHA PEL, leaves residual on metal • Alcohol – must be 70% concentration or higher, will not disinfect if organic material is present, hardens and swells plastic after repeat use • Quaternary Ammonium Compound (QUAT) – Absorbed by cotton and wool so must use microfiber, don't mix with hard water, can cause rust with prolonged use, not compatible with soap • Halogen (Chlorine) – inactivated by organic material, deteriorates with age, corrode stainless
Ease of application	• Ready to use wipe	• Spray product requires additional steps • Pour and use product requires even more steps that spray • If requires mixing/diluting, there is a greater chance for error
Contact time	• The lower the contact time, the better • Chlorine Hypochlorite (bleach) dilution – 1-minute contact time • 70% alcohol – 5-minute contact time	• 10-minutes is the typical time for most products – this means the product must stay wet for 10 minutes total – you must reapply if it dries sooner.
Hazards	• Class I hazards	• Multiple class II hazards or higher
First Aid Measures	• Minimum flushing post exposure	• Multiple first aid measures especially if require specific
Accidental Release	• Minor measures needed to clear and clean	• Multiple measures to clear and clean
PPE	• All disinfectants should require the use of gloves	• Additional PPE beyond gloves

Guidance provided by the United States Environmental Protection Agency and Occupational Safety, and the Health Administration Hazard Communication