

Cleaning and Disinfecting 3M™ Scott™ Reusable Full Facepiece Respirators, Regulators, and Demand Valves Following Potential Exposure to Coronaviruses

Description

During coronavirus outbreaks, some First Responder organizations may assign reusable respirators to workers providing care for persons with suspected or confirmed cases of coronavirus. This document contains considerations related to cleaning and disinfecting certain 3M Scott respirator equipment that will be reused after potential exposure to coronaviruses.

The 2008 U.S. Centers for Disease Control and Prevention (CDC) publication [Guideline for Disinfection and Sterilization in Healthcare Facilities](#)¹ (updated May 2019) includes information on disinfecting equipment and surfaces potentially contaminated by coronaviruses. The CDC investigated many chemicals and cited several chemical germicides as being effective for coronaviruses, when used as indicated in the product user instructions. In regions outside of the United States, where EPA-registered disinfectants may be unavailable, this CDC publication will be most helpful in addition to considering all applicable local guidance for your region as it relates to disinfection for coronaviruses.

More recently, the CDC has published [Interim Infection Prevention and Control Recommendations for Healthcare Personnel During the Coronavirus Disease 2019 \(COVID-19\) Pandemic](#)² indicating that EPA-registered, hospital-grade disinfectants are appropriate for SARS-CoV-2 in healthcare settings. The United States Environmental Protection Agency (EPA) published [List N: Disinfectants for Use Against SARS-CoV-2](#)³. It is a list of EPA-registered antimicrobial products for use against novel coronavirus SARS-CoV-2 (the cause of COVID-19) as a reference for specific disinfectants that can be used against coronaviruses. Locations in Canada may also want to refer to the [Health Canada List of Hard Surface Disinfectants for COVID-19](#).⁴

NOTE: 3M Scott relies on the expertise of the CDC and EPA with respect to microbiological efficacy and has not evaluated the effectiveness of these agents with regards to inactivating biological pathogens on 3M Scott equipment.

3M Scott has tested one of the CDC cited chemicals for compatibility with respirator materials. The E-Z Flo+ mask mounted regulators (MMR), Tempest demand valves, and the full facepieces listed in Appendix 1 were tested with sodium hypochlorite (at a free chlorine concentration of 5,000 ppm) for a 1-minute dwell time. These tests confirmed that this chemical will have limited detrimental effect on respirator materials when used at the stated concentration, for the stated dwell time, following the cleaning directions provided in the respirator Operating and Maintenance User Instructions and as described herein. Other concentration(s) and contact time(s) of sodium hypochlorite can be considered as outlined by the CDC in [Elastomeric Respirators: Strategies During Conventional and Surge Demand Situations; Conventional, Contingency, and Crisis Strategies](#).⁷

3M Scott does not recommend cleaning or disinfecting of filter media (e.g., flexible disc style filters, pre-filter pads, etc.). However, some 3M & 3M Scott filter products (e.g., 7093, 6092X, 7422-FP1, CBRN Cap-1, MPC Plus, PF10, PF251, etc.) have a hard-plastic case surrounding the filter media. The outside surface of the hard-plastic case can be wiped down for cleaning and disinfection using a clean damp cloth soaked in the appropriate solution. For disinfecting solution, apply until visibly wet for the appropriate contact time and then remove the disinfecting solution with a clean, water-soaked cloth and air dry. Do not allow the cleaning or disinfecting solution to reach the internal filter media and do not submerge the hard-case filters in any liquid. For filters with hard plastic cases, utilize the same cleaning and disinfection solutions as recommended for 3M Scott full facepieces.

NOTE: The guidance in this Technical Bulletin may exceed the directions found in certain Operating and Maintenance User Instructions and is therefore intended only for cleaning and disinfecting the specified respirators following potential exposure to coronaviruses. Note that respirator full facepiece components may experience detrimental effects such as degradation over time with prolonged or extended use of disinfecting products. As discussed in the product Operating and Maintenance User Instructions, users must inspect their respirator prior to each use. If you discover any signs of damage, remove the full facepiece respirator from service and either replace components or replace the entire facepiece as appropriate, following the guidance in the product Operation and Maintenance User Instructions.

Your facility should review this information thoroughly prior to selecting a disinfecting product for your equipment and specific application. Follow the hygiene and infection control practices established by your facility for the targeted organisms, including coronaviruses.

Please always refer to the latest information from trusted sources such as the World Health Organization ([WHO](#)), the U.S. Centers for Disease Control and Prevention ([CDC](#)), the U.S. Occupational Safety and Health Administration ([OSHA](#)) and the European Centre for Disease Prevention and Control ([ECDC](#)) regarding selection, use, maintenance and cleaning of personal protective equipment.

Cleaning and Disinfecting 3M Scott Full Facepieces Listed in Appendix 1

- 1) Cleaning is recommended after each use. Nitrile or vinyl gloves should be worn during cleaning as well as other personal protective equipment (PPE) as indicated.
- 2) Remove any filters or cartridges. The full facepiece may be further disassembled as necessary.
- 3) Remove accessories as necessary and as directed in the Operating and Maintenance User Instructions.
- 4) Inspect the full facepiece per the Operating and Maintenance User Instructions to identify any damage or excessive wear. Repair or replace the full facepiece as necessary.
- 5) Clean the full facepiece by immersing it in warm water not to exceed 110 °F (43 °C), and scrub with soft brush until clean. Add neutral detergent if necessary. Do not use cleaners containing lanolin or other oils. **NOTE:** Solvents and strong detergency may damage 3M Scott full facepiece respirators and respirator components and should not be used for cleaning.
- 6) Rinse thoroughly with fresh warm water.
- 7) Disinfect the full facepiece with the selected disinfectant solution, strictly following the manufacturer's user instructions either by spraying to completely cover all surfaces or full immersion in a container of solution for the instructed dwell time. Do not exceed the concentration and dwell time mentioned above (for the 5000 ppm hypochlorite) or listed in the user instructions for the selected disinfectant.
- 8) Rinse thoroughly with fresh warm water.
- 9) Air dry in a non-contaminated area or follow the directions provided in the Operating and Maintenance User Instructions provided with the full facepiece.
- 10) Inspect and reassemble the respirator as described in the Operation and Maintenance User Instructions.
- 11) The respirator should be stored in a non-contaminated area when not in use.

Glossary of Terms^{5,6}

Cleaning: Removal of soil (organic and inorganic) and foreign material from objects and surfaces. This is typically accomplished with water and mechanical action. Neutral detergents may be used to assist the process.

NOTE: Failure to remove soil and foreign material (face oils, etc.) from an object can make the disinfecting or sterilizing process ineffective.

Sanitizing: A process to reduce the number of microorganisms on an inanimate object to “safe” levels (but may not destroy disease-producing organisms). Dishes and eating utensils are normally sanitized.

Dwell time: For the purposes of this document, dwell time and contact time have the same meaning when referring to the length of time that a disinfecting solution remains in contact with a respirator facepiece.

Operating and Maintenance User Instructions: For the purposes of this documents, this term has the same meaning as User Instructions.

Disinfecting: A process of inhibiting or destroying disease-producing microorganisms (but may not kill bacterial spores). It usually involves the use of chemicals, heat, and/or ultraviolet light and is divided into three categories: high, intermediate and low-level disinfection.

Sterilizing: A validated process to render a product free of all forms of viable microorganisms, including bacteria, viruses, spores, and fungi.

Before using any of the chemicals, products or information detailed herein, you must evaluate it and determine if it is suitable for your intended use. You assume all risks and liability associated with such use. 3M Scott makes no warranties relating to the efficacy of any of the products detailed herein in preventing the spread and/or contraction of coronaviruses. 3M Scott will not be liable for any loss or damage arising from any information contained herein, whether direct, indirect, special, incidental or consequential, regardless of the legal or equitable theory asserted, including warranty, contract, negligence or strict liability.

Technical information provided by 3M Scott is based on experience and/or test data believed to be reliable, but the results may not be relevant to every user’s application. For this reason, 3M Scott does not accept any responsibility or liability, direct or consequential, arising from reliance upon any information provided. The user should determine the suitability of any disinfectant product for compatibility for use with 3M products.

If you have any questions or concerns, please contact your local 3M Scott representative or Technical Service at 800-243-4630.

Appendix 1: 3M™ Scott™ Full Facepieces

- 3M™ Scott™ AV-2000 Facepiece
- 3M™ Scott™ AV-3000 Facepiece
- 3M™ Scott™ AV-3000 SureSeal™ Facepiece
- 3M™ Scott™ AV-3000 HT Facepiece
- 3M™ Scott™ Weld-O-Vista Facepiece
- 3M™ Scott™ ProMask /FM3 Facepiece
- 3M™ Scott™ Vision 2/FM4 Facepiece
- 3M™ Scott™ Vision AMS Facepiece
- 3M™ Scott™ ProMask Facepiece (All variants)
- 3M™ Scott™ Vision 3 Facepiece (All variants)
- 3M™ Scott™ Vision C5 Facepiece (All variants)

References

- 1) Guideline for Disinfection and Sterilization in Healthcare Facilities, 2008; updated 2009. United States Centers for Disease Control. William A. Rutala, Ph.D., M.P.H., David J. Weber, M.D., M.P.H. and the Healthcare Infection Control

- Practices Advisory Committee (HICPAC). 2008. <https://www.cdc.gov/infectioncontrol/pdf/guidelines/disinfection-guidelines-H.pdf>
- 2) Interim Infection Prevention and Control Recommendations for Healthcare Personnel During the Coronavirus Disease 2019 (COVID-19) Pandemic. <https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-recommendations.html>
 - 3) EPA's Registered Antimicrobial Products for Use Against Novel Coronavirus SARS-CoV-2, the Cause of COVID-19. United States Environmental Protection Agency. 03/03/2020. <https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>
 - 4) Hard-surface disinfectants and hand sanitizers (COVID-19): List of hard-surface disinfectants. Health Canada, Government of Canada. <https://www.canada.ca/en/health-canada/services/drugs-health-products/disinfectants/covid-19/list.html>
 - 5) Rutala, WA. American Journal of Infection Control. APIC Guideline for Selection and Use of Disinfectants. Vol. 24, No. 4, pp. 313-342, August 1996.
 - 6) Rutala, WA. CDC. Guideline for Disinfection and Sterilization in Healthcare Facilities. 2008.
 - 7) Elastomeric Respirators: Strategies During Conventional and Surge Demand Situations Conventional, Contingency, and Crisis Strategies. <https://www.cdc.gov/coronavirus/2019-ncov/hcp/elastomeric-respirators-strategy/index.html>

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