

Cleaning and Disinfecting Guide

GVS-RPB Healthcare PPE



PROTECTION FROM COVID-19 EXPOSURE

Quick Summary

The following disinfectants have been tested on the PX4 Air[®], PX5[®] and HX5[™] PAPRs, and Z-Link[®], T-Link[®] and T200[™] respirator headtops external surfaces:

- Clorox Germicidal Bleach wipes
- Clorox Peroxide Wipes
- Ecolab Disinfectant
- Ecolab Quaternary Disinfectant Wipes
- Sani Cloth Bleach Wipes
- Super Sani Cloth
- Clinell Universal Wipes*
- Optim1 Wipes
- Oxivir TB Wipes
- Ethanol (70-97%)
- Sodium hypochlorite (0.5% Solution)

Please read this complete document before developing cleaning and disinfecting protocols for GVS-RPB Healthcare PPE.

These disinfectants are effective against SARS-COV-2 (according to EPA, and independent testing for Clinell Universal Wipes*). A list of approved disinfecting products is provided in this document.

*Clinell wipes are proven effective against the coronavirus that causes COVID-19 (SARS-CoV-2) in a 30 second contact time, visit <https://gamahealthcare.com/latest/clinell-efficacy-against-coronavirus-covid-19> for the full report.

Description

These guidelines are to help employers develop cleaning and disinfecting protocols for PX4 Air, PX5, and HX5 Powered Air Purifying Respirators (PAPRs), Z-Link, T-Link and T200 respirator headtops, and specifically, to select appropriate disinfecting agents for SARS-COV-2.

The United States Environmental Protection Agency (EPA) has identified disinfectants that are effective on surfaces contaminated with SARS-COV-2 (COVID-19) (www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2). Of these disinfectants, those listed in Table A (page 4 of this document), can be used on PX4 Air, PX5, and HX5 PAPRs, Z-Link, T-Link, and T200 headtops. These chemicals have been tested on our products and will not cause damage that impairs performance. †Chemicals that we have not conducted comprehensive testing with or the use of autoclaves may damage the products.

The cleaning and disinfecting agents listed are also effective on a range of other pathogens. See the U.S. Centers for Disease Control and Prevention (CDC) guidelines for disinfection and sterilization in healthcare settings (www.cdc.gov/infectioncontrol/pdf/guidelines/disinfection-guidelines-H.pdf).

Note: GVS-RPB relies on the EPA and CDC regarding these products' disinfecting capabilities. GVS-RPB has not independently confirmed the effectiveness of these agents.

†Please refer to Table A for consumable part results.

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Cleaning and Disinfecting Procedures

- Follow your infection control policy and manufacturer's instructions to use the disinfecting agents correctly. Wear PPE appropriate for both the potential contaminants and for the cleaning products used.
- Use only water, mild detergent and approved disinfecting products listed in Table A.
- Before use, always inspect products for signs of wear, tear and damage.

Cleaning and Disinfecting the PX4 Air, PX5 or HX5 PAPR:

The guidelines for cleaning and disinfecting PAPRs are strictly for the housing unit. Do not clean or disinfect the cartridge/filter.

PAPR Preparation:

1. Breathing tube: Leave the breathing tube attached. If using a Tychem[®] breathing tube cover, remove and dispose it.
2. Inspection: Inspect the product according to the instruction manual (available at www.gvs-rpb.com/healthcare/resources).
3. Belt:
 - PX4 Air: Leave the belt in place.
Please note: This belt has not been manufactured from easy clean materials and complete decontamination cannot be guaranteed.
 - PX5 or HX5: Unclip the belt holder from the PX5 or HX5 fan housing.
4. Cartridge/Filter: Do not clean or disinfect the cartridge/filter. Leave pre-filter and HEPA or gas cartridge/filter installed until it is time to replace cartridge/filter. Refer to cartridge/filter change out guide below.
5. Battery:
 - PX4 Air: Remove the battery.
 - PX5 or HX5: Leave the battery sealed in the battery compartment. Refer to the user manual for information on the PX5's or HX5's IP ratings. The battery can be removed after the unit has been cleaned and disinfected.

PAPR Cleaning and Disinfecting:

Do not submerge the PX4 Air, PX5, or HX5. Keep liquid out of the breathing tube and outlet of the PAPR.

WARNING! The PX4 Air has electrical components and could cause injury if put in contact with water - refer to user manual for further detail.

1. Use a damp cloth with mild detergent to clean before disinfecting.
 - a. Clean the breathing tube.
 - b. Clean the cartridge/filter doors and fan housing.
 - c. Clean the belt and belt holder.
 - d. For the PX4 Air, carefully wipe the PX4 Battery and avoid getting the battery contacts wet.
2. Wipe off detergent residue with a damp cloth and dry completely.
3. Apply an approved disinfecting product. For liquid disinfectants, use a cloth.
4. Allow the disinfectant to sit on the surface for the specified contact time (see EPA List N and manufacturer's instructions).
5. Use a damp cloth to remove all residual disinfectant solution. Do not allow water to get in the inlet or outlet of the PX4 Air, PX5 or HX5.
6. Before storing or using, air dry all parts at temperatures below 100°F (37.7°C).

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Cleaning, Disinfecting & Rinsing the Z-Link, T-Link or T200 Headtop:

Note: GVS-RPB does not recommend sharing the Z-Link, T-Link and T200 respirator headtops between users. If sharing occurs, clean and disinfect between users.

Z-Link, T-Link and T200 Preparation

1. Breathing tube: Disconnect the breathing tube. If using a Tychem® breathing tube cover, remove and dispose it.
2. Tychem® hood: DuPont™ does not specify how many times a Tychem® hood can be reused. Please note this product is a consumable and is therefore not expected to perform for as long as the headtop's internal framework. Examine for signs of wear/tears and damage to stitching and hood after each use to determine if a hood can be reused. Refer to DuPont™ documentation (link on Page 5) for further information.
3. Inspect the Z-Link/T-Link/T200, including frame and padding, according to the instruction manual. Replace worn or damaged parts. If reusing the hood, leave it in place and clean and disinfect with the headtop.*

Z-Link, T-Link and T200 Cleaning and Disinfection

1. Clean all Z-Link/T-Link/T200 and exterior hood surfaces with a damp cloth and mild detergent.
2. Apply one of the approved disinfecting products.
3. Allow the disinfectant to sit on the surface for the specified contact time (see EPA List N and manufacturer's instructions).
4. Rinse thoroughly to remove residual cleaning and disinfecting solution.
5. Padding can be washed in cold water with mild detergent.
6. Before reinstalling, using or storing, air dry all parts at temperatures below 100°F (37.7°C).

Reassembly & Storage of the Respirator

1. After drying completely, reassemble the PX4 Air, PX5, or HX5 PAPR and the Z-Link, T-Link, or T200 headtop.
2. Inspect the Z-Link/T-Link/T200, including frame and padding, according to the instruction manual. Replace worn or damaged parts.
3. Tychem® hood: DuPont™ does not specify how many times a Tychem® hood can be reused. Please note this product is a consumable and is therefore not expected to perform for as long as the headtop's internal framework. Examine for signs of wear/tears and damage to stitching and hood after each use to determine if a hood can be reused. Refer to DuPont™ documentation (link on Page 5) for further information.
4. PX4 Air/PX5/HX5: Remove the battery and charge - refer to the instruction manual.
5. Store in a clean environment - refer to the instruction manual.

Cartridge/Filter Changing Guide

Follow your organization's infection control policies and respiratory protection program for timing of PAPR cartridge/filter changes.

PAPR cartridges/filters will typically not become clogged with particles when used to reduce airborne biological aerosols that contain viruses. Therefore, cartridge/filter changes will not be required due to reduced airflow. Your organization's infection control policies should define cartridge/filter change intervals based on best practices for the biological exposures involved.

Do not attempt to clean the cartridge/filter. Replace and dispose cartridges/filters according to your employer's established hygiene and infection control practices.

*If the interior of the hood is suspected of being contaminated, DO NOT attempt to clean, disinfect and reuse the hood; handle and dispose of the hood according to all applicable regulations.

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Table A - Approved Cleaning and Disinfecting Products*

	 T200™	 T-Link®	 Z-Link®	 PX4 Air® PAPR	 PX5® PAPR	 HX5™ PAPR	 Breathing Tube	 Easy Clean Belt	 Backpack Assembly
Clinell Universal Wipes NHSSC VJT119	✓	✓	✓	✓	✓	✓	✓	✓	✓
Clorox Germicidal Bleach Wipes EPA Reg No. 67619-12	✓	✓	✓	✓	✓	✓	✓	✓	✓
Clorox Peroxide Wipes EPA Reg No. 67619-25	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ecolab Disinfectant SKUs: 6000261, 6000262, 6000263 EPA Reg No. 1677-263	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ecolab Quaternary Disinfectant Wipes SKUs: 6000166, 6000169 EPA Reg No. 6836-372-1677	✓	✓	✓	✓	✓	✓	✓	✓	✓
Optim1 Wipes EPA Reg No. 74559-10-83259	—	—	✓	✓	✓	✓	✓	✓	✓
Oxivir TB Wipes EPA Reg No. 70627-56	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sani Cloth Bleach Wipes EPA Reg No. 9480-8	✓	✓	✓	✓	✓	✓	✓	✓	✓
Super Sani Cloth EPA Reg No. 9480-4	—	—	✓	✓	✓	✓	✓	✓	✓
Ethanol (70-97%)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sodium Hypochlorite (0.5% Solution)	✓	✓	✓	✓	✓	✓	✓	✓	✓

- ✓ No observable damage.
- ✓ Minor cosmetic damage is expected over time. Does not impede on performance of plastic parts. Tychem® materials will degrade faster and require regular replacement.†
- Moderate to significant damage may occur over time through repeated application of this disinfectant. This damage may affect performance or protection. Tychem hoods need to be replaced after each use.

Please note: consumable parts, such as Tychem® hoods, are generally designed to be disposed of and replaced as needed. Regardless of the rating in Table A, always ensure you complete thorough inspections to determine if products are suitable for use.

*Tested for 1,200 wipe-downs at 70°F (21°C) over the course of 30 days. Varying conditions and environments may lead to different results.

†Refer to Dupont for further information on Tychem® materials: [https://www.dupont.com/content/dam/dupont/amer/us/en/personal-protection/public/documents/en/Cleaning%20Guidelines%20for%20DuPont\(TM\)%20Tychem\(R\)%20Garments.pdf](https://www.dupont.com/content/dam/dupont/amer/us/en/personal-protection/public/documents/en/Cleaning%20Guidelines%20for%20DuPont(TM)%20Tychem(R)%20Garments.pdf)

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Works Cited

DuPont. (2020, March 24). Cleaning Guidelines for DuPont™ Tychem® garments for COVID-19.

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For complete safety, inspection, and use information for GVS-RPB products, see the instruction manuals available at www.gvs-rpb.com/healthcare/resources