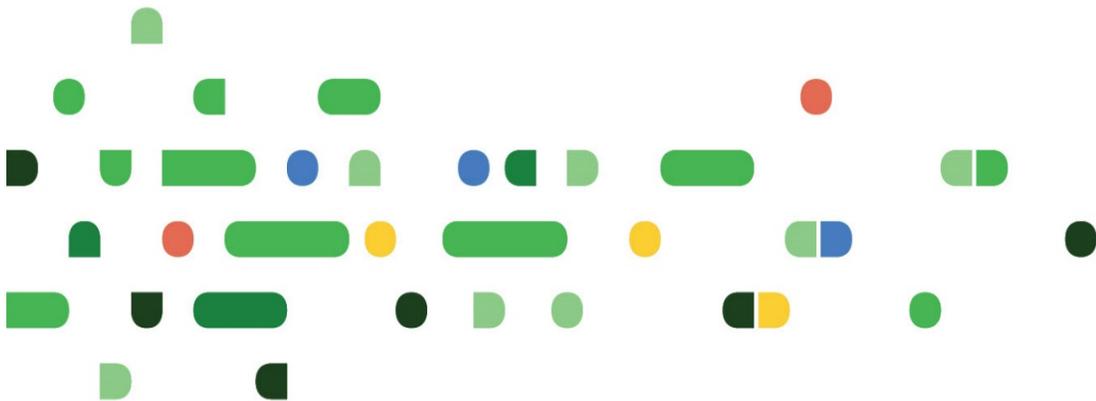




Omnicell Equipment Cleaning Guidelines

I 60-0251 Rev-D



About Omnicell

Omnicell is a leader in medication and supply dispensing automation, central pharmacy automation and IV robotics, analytics software, and medication adherence solutions. Hospitals, post-acute care sites, and pharmacies worldwide rely on Omnicell products to increase patient safety, streamline workflow, and more effectively address drug diversion and regulations.

This guide and accompanying software and/or hardware described in it are protected under copyright laws and may not be reproduced, adapted, or translated, wholly or in part, without the express written consent of Omnicell, Inc. The same proprietary and copyright notices must be attached to any permitted copies as were attached to the original documents.

Omnicell, Inc.
590 E. Middlefield Road
Mountain View, CA 94043
(650) 251-6100
www.omnicell.com

The following terms are trademarks of Omnicell, Inc. in the United States, other countries, or both.

Omnicell	ivFlex Designer	Pharmacy Line
OmniLinkRx	AcuDose-Rx	Enterprise Medication Manager
MedCarousel	Savvy	vSuite
PACMED	XT Anesthesia Workstation	Connect-Rx
PakPlus-Rx	Anesthesia-Rx	Autobond
ROBOT-Rx	Anywhere RN	Autogen
PROmanager-Rx	SinglePointe	Gemini
NarcStation	SafetyStock	MTS-350
WorkflowRx	FastEntry	MTS-500
MedShelf-Rx	FlexBin	Sureseal
Fulfill-Rx	OptiFlex	PillVue
i.v.STATION	Pandora	SureMed
i.v.STATION ONCO	PandoraVIA	Time My Meds
i.v.SOFT	Performance Center	

All other trademarks and trade names are the property of their respective owners.

Contents

- Overview **4**
 - Sanitation: Level 1..... 4
 - Disinfection: Level 2..... 4
 - Sterilization: Level 3..... 5

- Cleaning **6**
 - Recommended Cleaning Timeframes..... 6
 - Cleaning Recommendations 8
 - Product-Specific Cleaning 9

- Disinfection **16**
 - Disinfectant Cleaner Properties..... 16
 - Recommended Disinfectant Cleaners 17
 - Disinfection for Bloodeborne Pathogens 21

- References **22**

Overview

Cleaning and disinfection of equipment are key to infection control.

Frequent cleaning and disinfection of pharmacy products using readily available cleaners and disinfectants with EPA and OSHA approvals is essential for daily infection control in order to help reduce the transmission of pathogens while ensuring cost-effective personal and environmental safety, and product performance. This document describes cleaners recommended by Omnicell for cleaning and disinfecting pharmacy equipment.

For a complete list of Environmental Protection Agency (EPA) rules and guidelines for healthcare facilities see www.epa.gov.

For [COVID-19 resources](#), see the Centers for Disease Control (CDC) for the latest information. According to the CDC, you can refer to [List N: Disinfectants for Use Against SARS-CoV-2](#) on the EPA website for EPA-registered disinfectants that have qualified under EPA's emerging viral pathogens program for use against SARS-CoV-2.

Pharmacy equipment, which includes medication and supply dispensing systems, is essential to patient care and periodically requires cleaning and disinfection. Simple cleaning might be needed to remove dirt, oils, and fingerprints remaining from general handling and usage. Depending on the environment and location within a hospital, pharmacy equipment might be handled by multiple users in the course of their daily workflow. Within the hospital environment, frequent disinfection is often required to mitigate the transmission of pathogens from user to user or from user to patient.

Most hospitals have internal infection control procedures and practices already established. Refer to these internal procedures and practices for guidance on cleaning and disinfection frequency, disinfection methods, typical cleaning products, and any reporting requirements. The cleaners and disinfectants indicated are recommended by Omnicell, but many similar or equivalent cleaners and disinfectants are readily available.

Sanitation: Level 1

The first step is to clean or sanitize the equipment by removing foreign material, such as, soil/dirt, microorganisms, and any organic matter.

Sanitation is generally done by using detergents. The sanitation process is used to clean equipment that touches only intact skin (for example, blood pressure cuffs, stethoscopes, furniture, sinks, and so on); these instruments or equipment can be reused after sanitizing without further disinfection or sterilization.

Disinfection: Level 2

The second step is to disinfect the equipment by applying a chemical which would destroy most pathogens.

This step is required on equipment that may come in contact with intact mucous membranes

The Environmental Protection Agency (EPA) lists registered antimicrobial products that are effective against certain blood borne/body fluid pathogens. Visit the EPA's website at <http://www.epa.gov> for additional information.

The Department of Labor's Occupational Safety and Health Administration (OSHA) standard 1910.1030 for blood borne pathogens provides a standard for exposure to potentially infectious materials. For the latest information on the compliance directive for blood borne pathogens, visit OSHA's website at <http://www.osha.gov>.

Disinfection kills many, but not all, microorganisms on surfaces. It does not destroy spore-forming organisms. For selection of a disinfectant, the level of disinfection required should be determined according to the contamination likely to be present. Disinfection can be classified into three levels:

- LLD (Low Level Disinfectant) - destroys all vegetative bacteria (except tubercle bacilli), lipid viruses, some nonlipid viruses, and some fungi, but not bacterial spores.
- ILD (Intermediate Level Disinfectant) - destroys all vegetative bacteria, lipid enveloped and some nonlipid enveloped viruses, and fungus spores, but not bacterial spores.
- HLD (High Level Disinfectant) - destroys all vegetative bacteria, viruses and other microorganisms, and some bacterial spores.

Blood must be cleaned thoroughly before applying disinfectant. For heavily soiled items, thoroughly clean surfaces prior to disinfection.

Sterilization: Level 3

The third step is to sterilize the equipment by completely destroying all microbial life including bacterial spores.

The third step is to sterilize the equipment by completely destroying all microbial life including bacterial spores. This is required only for equipment that penetrates the skin (for example, needles), comes in close contact with mucous membranes or non-intact skin, or comes in contact with the blood stream or with subdermal tissues.

Omicell pharmacy and nursing equipment is designed to come into contact with normal and intact skin. Therefore, the pharmacy equipment can typically be disinfected and reused without sterilization, meaning that level 1 and 2 are sufficient. However, specific circumstances may warrant a level 3 sterilization.

Cleaning

Basic cleaning could be all that is necessary to remove dirt, oils, and fingerprints from commonly accessed surfaces such as keyboards, mice, scanners, and touchscreens.

Omnicell products are often handled on a daily basis in the hospital environment. Multiple users might interface with Omnicell products and general handling might leave dirt, oils, and fingerprints on surfaces. Many products are used in environments where disinfection requirements are not as stringent, due to their remote proximity to patients and pathogens.



Many disinfecting products are effective at both cleaning and disinfecting equipment surfaces.

Recommended Cleaning Timeframes

Refer to these recommendations as an example of cleaning schedules for Omnicell equipment. For more information about your approved procedures and products, check with your organization's infection control department.

The suggested timeline for cleaning is for reference purposes only. Additional cleaning at more regular intervals could be required in certain circumstances.

PERIODIC CLEANING

Periodic cleaning should be done on a consistent schedule, such as quarterly. Consider these recommendations for periodic cleaning:

- Remove and vacuum the bottom shelf of each cabinet cell to remove accumulated dust. Dust cabinet tops as needed.
- Vacuum the CPU fan filter to prevent dust accumulation, or alternatively, remove it to rinse with water and dry.

REGULAR CLEANING

Regular cleaning should be done daily, and at minimum every two weeks.

Component	Minimum Recommended Frequency	General Cleaning	Disinfecting	Notes
Exterior Painted Metal Surfaces	Regularly as needed	50/50 solution of isopropyl alcohol and water Mild detergent and water	Hospital-grade disinfecting products, such as those made by PDI, Clorox Healthcare, or Diversey	
Keyboard/Mouse	Every 2 weeks	50/50 solution of isopropyl alcohol and water Mild detergent and water Commercial glass cleaner	Hospital-grade disinfecting products, such as those made by PDI, Clorox Healthcare, or Diversey	
Touchscreen	Every 2 weeks	50/50 solution of isopropyl alcohol and water Mild detergent and water	70% solution of isopropyl alcohol and water	
Fingerprint Reader	Daily	50/50 solution of isopropyl alcohol and water Mild detergent and water	Hospital-grade disinfecting products, such as those made by PDI, Clorox Healthcare, or Diversey	After cleaning, make sure to remove any lint or cleaning residue with a clean, lint-free cloth.

Component	Minimum Recommended Frequency	General Cleaning	Disinfecting	Notes
Drawers/Bins, FlexLock, External Return Bin (ERB)	Every 2 weeks	50/50 solution of isopropyl alcohol and water Mild detergent and water Commercial glass cleaner	Hospital-grade disinfecting products, such as those made by PDI, Clorox Healthcare, or Diversey	Wipe spills promptly and wipe away cleaning residue with a clean, dry cloth to prevent it from damaging supplies. Clean patient-specific bins (used with SinglePointe™) after patient medications are transferred out.
Barcode Scanner	Every 2 weeks	50/50 solution of isopropyl alcohol and water Mild detergent and water	Hospital-grade disinfecting products, such as those made by PDI, Clorox Healthcare, or Diversey	Do not clean scanners with window cleaner or equivalent products. Clean wireless scanners with the battery installed to prevent cleaning solution from entering the scanner.
Acrylic Doors	Regularly as needed	Mild detergent and water Commercial glass cleaner	Hospital-grade disinfecting products, such as those made by PDI, Clorox Healthcare, or Diversey	Do not tape post-it notes on acrylic because they can scar the surface.

Cleaning Recommendations

Specific components of the Omnicell product line need special care when being cleaned due to the materials used, or the type of construction.

Specific cleaning recommendations:

- Do not use a spray bottle to apply cleaning solution directly to the touchscreen, LCD, fingerprint reader or keyboard surfaces where spray would run down the surface. Spray bottles can be used to apply

cleaner to a cloth prior to wiping the surface. Additionally, do not use a cloth that is dripping with a cleaning solution. Excess cleaning solution can enter the product along seams and openings or pool on the surfaces.

- It is preferred that surfaces are cleaned with a damp lint-free cotton cloth or equivalent. Note that some pre-moistened wipes or towelettes may leave lint on the surface after the solution dries. Lint on the surface does not affect the equipment operation. Use a lint-free cloth on the fingerprint reader.
- Ensure Biometric fingerprint readers are wiped clean, and remove any lint or cleaning residue.
- To prevent surface finish damage, do not use abrasive or harsh scrub pads to clean any surfaces.
- Avoid harsh chemicals such as acetone or toluene, which dissolve most plastics.
- Scanners should not be cleaned with window cleaner or equivalent products.
- Wireless scanners should be cleaned with the battery installed. To prevent cleaning solution from entering the scanner, do not clean the scanner with the battery removed.

Product-Specific Cleaning

Refer to this table for product-specific cleaning recommendations.

XT SERIES PRODUCTS

Omniceil XT cabinets, consoles and accessories were tested successfully by Omnicell using five cleaning solutions: bleach, hydrogen peroxide, 50/50 isopropyl alcohol and water mix, 70% isopropyl alcohol, Virex TB and bleach. There were no observable functional issues or defects.

Component	General Cleaning	Disinfecting
Exterior Painted Metal Surfaces	50/50 solution of isopropyl alcohol and water Mild detergent and water	Virex, ZEP, Tough Guy, Ramsey
Keyboard/Mouse	50/50 solution of isopropyl alcohol and water Mild detergent and water	Sani-Cloth Plus, Super Sani-Cloth, Oxivir Tb Wipes
Touchscreen	50/50 solution of isopropyl alcohol and water Mild detergent and water	70% solution of isopropyl alcohol and water
Fingerprint Reader	Less than 50% solution of isopropyl alcohol and water Mild detergent and water	70% solution of isopropyl alcohol and water

Component	General Cleaning	Disinfecting
Pharmacy drawers, Flex Lock, External Return Bin (ERB)	50/50 solution of isopropyl alcohol and water Mild detergent and water	Virex, ZEP, Tough Guy, Ramsey
Scanner	50/50 solution of isopropyl alcohol and water Mild detergent and water	70% solution of isopropyl alcohol and water
Acrylic doors	50/50 solution of isopropyl alcohol and water Mild detergent and water	Virex, ZEP, Tough Guy, Ramsey
Glass shelves	50/50 solution of isopropyl alcohol and water Mild detergent and water	

G4 SERIES PRODUCTS

Component	General Cleaning	Disinfecting
Exterior Painted Metal Surfaces	50/50 solution of isopropyl alcohol and water Mild detergent and water	Virex, ZEP, Tough Guy, Ramsey
Keyboard/Mouse	50/50 solution of isopropyl alcohol and water Mild detergent and water	Sani-Cloth Plus, Super Sani-Cloth, Oxivir Tb Wipes
Touchscreen	50/50 solution of isopropyl alcohol and water Mild detergent and water	70% solution of isopropyl alcohol and water

Component	General Cleaning	Disinfecting
Fingerprint Reader	Less than 50% solution of isopropyl alcohol and water Mild detergent and water	70% solution of isopropyl alcohol and water
Pharmacy drawers, Flex Lock, ERB	50/50 solution of isopropyl alcohol and water Mild detergent and water	Virex, ZEP, Tough Guy, Ramsey
Scanner	50/50 solution of isopropyl alcohol and water Mild detergent and water	70% solution of isopropyl alcohol and water
Acrylic doors	50/50 solution of isopropyl alcohol and water Mild detergent and water	Virex, ZEP, Tough Guy, Ramsey
Glass shelves	50/50 solution of isopropyl alcohol and water Mild detergent and water	

ANESTHESIA WORKSTATION

Component	General Cleaning	Disinfecting
Exterior Painted Metal Surfaces	50/50 solution of isopropyl alcohol and water Mild detergent and water	Virex, ZEP, Tough Guy, Ramsey
Keyboard/Mouse	50/50 solution of isopropyl alcohol and water Mild detergent and water	Sani-Cloth Plus, Super Sani-Cloth, Oxivir Tb Wipes

Component	General Cleaning	Disinfecting
Touchscreen	50/50 solution of isopropyl alcohol and water Mild detergent and water	70% solution of isopropyl alcohol and water
Fingerprint Reader	Less than 50% solution of isopropyl alcohol and water Mild detergent and water	70% solution of isopropyl alcohol and water
Work Surface	50/50 solution of isopropyl alcohol and water Mild detergent and water	Virex, ZEP, Tough Guy, Ramsey
Scanner	50/50 solution of isopropyl alcohol and water Mild detergent and water	70% solution of isopropyl alcohol and water

CONTROLLED SUBSTANCE MANAGER

Component	General Cleaning	Disinfecting
Exterior Plastic Surfaces	70% solution of isopropyl alcohol and water Cloro-Wipe Towlette, Sani-Cloth HB, Sani-Cloth Plus, Super Sani-Cloth, Viraguard, Virex	Oxivir Tb Wipes
Keyboard/Mouse	70% solution of isopropyl alcohol and water Cloro-Wipe Towlette, Sani-Cloth HB, Sani-Cloth Plus, Super Sani-Cloth, Viraguard, Virex	Oxivir Tb Wipes

Component	General Cleaning	Disinfecting
Touchscreen	70% solution of isopropyl alcohol and water, Alcohol prep pads Tuffie wipes	Oxivir Tb Wipes
Scanner	50/50 solution of isopropyl alcohol and water Mild detergent and water	Oxivir Tb Wipes

CENTRAL PHARMACY MANAGER

Component	General Cleaning	Disinfecting
Exterior Plastic Surfaces	70% solution of isopropyl alcohol and water Cloro-Wipe Towlette, Sani-Cloth HB, Sani-Cloth Plus, Super Sani-Cloth, Viraguard, Virex	Oxivir Tb Wipes
Keyboard/Mouse	70% solution of isopropyl alcohol and water Cloro-Wipe Towlette, Sani-Cloth HB, Sani-Cloth Plus, Super Sani-Cloth, Viraguard, Virex	Oxivir Tb Wipes
Touchscreen	70% solution of isopropyl alcohol and water, Alcohol prep pads Tuffie wipes	Oxivir Tb Wipes

Component	General Cleaning	Disinfecting
Scanner	50/50 solution of isopropyl alcohol and water Mild detergent and water	Oxivir Tb Wipes

ACUDOSE-RX CABINETS

Follow guidelines for cleaning automated dispensing cabinets.

Elo touchscreens are used on Acudose-Rx cabinets. For more information, see the [Elo website](#), and refer to their Technical Support topics for a list of Elo approved cleaners and disinfectants for touchscreens.

ANESTHESIA-RX CABINETS

Follow guidelines for cleaning automated dispensing cabinets.

Elo touchscreens are used on Anesthesia-Rx cabinets. For more details, see the [Elo website](#), and refer to their Technical Support information for a list of Elo approved cleaners and disinfectants for touchscreens.

SAVVY MOBILE CART

Savvy keyboards come with a protective overlay membrane. Replace the membrane on an annual, or more frequent, basis depending on usage and wear. Contact Omnicell if a replacement overlay membrane cover is needed.

Component	General Cleaning	Disinfecting
Exterior Painted Metal Surfaces, Exterior Plastic Surfaces	50/50 solution of isopropyl alcohol and water Mild detergent and water	Virex, ZEP, Tough Guy, Ramsey
Keyboard/Mouse	50/50 solution of isopropyl alcohol and water Mild detergent and water	Replace keyboard overlay membrane Virex, ZEP, Tough Guy, Ramsey, Sani-Cloth Plus, Super Sani-Cloth

Component	General Cleaning	Disinfecting
Touchscreen	50/50 solution of isopropyl alcohol and water Mild detergent and water	70% solution of isopropyl alcohol and water
Scanner (Symbol)	50/50 solution of isopropyl alcohol and water Mild detergent and water	70% solution of isopropyl alcohol and water
Scanner (Code)	50/50 solution of isopropyl alcohol and water Mild detergent and water	Sani-Cloth HB, Sani-Cloth Plus, Super Sani-Cloth, Virex

Disinfection

Easy-to-use, fast-acting germicidal cleaners can clean and disinfect common nonporous surfaces and equipment, thereby providing a quick turnaround for scheduling of equipment usage.

Disinfectant cleaners must be properly applied and safety procedures must always be followed when using these chemicals. To ensure optimum effectiveness, the manufacturer's instructions must be carefully followed when using disinfectants.

Personal protection devices must be worn by the person performing the infection control. This includes disposable protective gloves, protective gowns, face masks, or eye coverings as appropriate when handling infected blood, body fluids, or other infectious materials. The use of puncture resistant nitrile gloves is highly recommended.

Any non-essential items can be removed from the pharmacy equipment to be cleaned or disinfected to prevent chemicals from splashing on these items. The AC power cord of the Omnicell equipment must not be connected to an AC outlet. All blood and other body fluids must be thoroughly cleaned from surfaces and objects before disinfection by the germicidal cleaners. As a precaution, do not use or store cleaners near heat or open flame.

After equipment has been disinfected, care must be exercised to prevent contamination of any surface that may later come in contact with a patient. The disposal of infectious waste must be in accordance with federal, state, or local regulations.

Disinfectant Cleaner Properties

Disinfectants kill microorganisms, while disinfectant cleaners kill germs and clean surfaces.

The EPA requires that all disinfectants and disinfectant cleaners be reviewed and registered before they can be offered for sale. Manufacturers must prove a product's effectiveness on various pathogenic organisms when the product is properly diluted according to label directions. These products must have special handling, use, and disposal procedures. The EPA assigns an EPA Registration Number for each product and this number must be displayed on every container of the product.

Desirable features of a disinfectant cleaner include:

- One-step disinfectant cleaner; functions as cleaner and disinfectant
- Effective against TB, HBV, HIV-1, MRSA, VRE and other pathogens
- Complies with OSHA's Bloodborne Pathogen standard for disinfecting surfaces soiled with blood or other potentially infectious body fluids
- EPA-registered hospital germicide formula; must have an EPA Registration Number
- Safe for daily use
- Has one or more years of shelf life
- Non-phenol based, non-corrosive; therefore, will not damage surfaces
- Pleasant fragrance
- Reasonable cost
- Preferably, ready-to-use formula; otherwise just dilute with water, apply, and wipe

There are four types of disinfectants:

- Quaternary Ammonium Chlorides (Quats)**
 - Based on the active ingredient benzalkonium chloride
 - Destroy bloodborne pathogens or harmful microorganisms, such as HIV viruses and antibiotic-resistant strains of bacteria
 - Provide a safe and neutral pH
 - Disinfect and clean surfaces without damaging finish

- Chlorine Bleach Solution**
 - Good disinfectant but poor cleaner
 - The acidic solution is extremely effective against many types of microorganisms including bacteria, fungi and viruses
 - Requires that surfaces be cleaned prior to their use
 - Lacks detergency, is very corrosive, emits unpleasant odors, attacks and discolors hard surfaces depending on concentration.

- Phenols**
 - Used on areas where surfaces are contaminated with blood and body fluids
 - Destroy airborne pathogens, such as those that cause tuberculosis
 - Not as corrosive as Chlorine
 - Can damage surface finishes

- Iodines**
 - For disinfection
 - Can stain surfaces and corrode some metals

Cleaners with higher pH (basic) tend to increase surface luster. Cleaners with lower pH (acidic) tend to degrease and to diminish surface gloss. Neutral-pH cleaners have quats in their ingredients. Cleaners that are formulated for dilution must be properly diluted to be effective. Most active ingredients in concentrated cleaners are activated by water. Too little dilution might leave a sticky surface.

Recommended Disinfectant Cleaners

When used as directed, approved products are highly effective against pathogenic organisms including bacteria, antibiotic resistant bacteria, viruses, and fungi.

The approved products meet CDC and OSHA guidelines. For details, refer to the manufacturer's specifications or data sheets and MSDS.

Oxivir Tb Wipes (12/32 fl. oz)	
Manufacturer	Diversey, Inc.
Manufacturer P/N	4599516
EPA #	70627-60
pH	2.5 – 3.5

Oxivir Tb Wipes (12/32 fl. oz)	
Active Ingredient	Benzyl Alcohol, Hydrogen Peroxide
Health*	0
Fire*	0
Reactivity*	0
Comments	Wipes Flash point >200F

Virex Tb Disinfectant Cleaner (12/32 fl. oz)	
Manufacturer	Johnson Diversey (Johnson Wax)
Manufacturer P/N	4743
EPA #	70627-2
pH	11.5-11.9
Active Ingredient	Ammonium Chlorides, Ethylbenzyl, Diethylene Glycol Butyl Ether
Health*	2
Fire*	0
Reactivity*	0
Comments	Spray Flash point 200F

ZEP Lemon Disinfectant Deodorizing Cleaner

Manufacturer	Zep, Inc.
Manufacturer P/N	R02201 (12 qts/case) R02224 (4-1 gal/case)
EPA #	1839-101-1270
pH	12.5-13.5
Active Ingredient	Quaternary Ammonium Chloride
Health*	3
Fire*	0
Reactivity*	0
Comments	1 year minimum shelf life Soluble in cold and hot water Flash point = none Disinfectant deodorizing cleaner, size 1 gal., lemon fragrance Dilution 1:28 - 1:64 Hospital grade

Tough Guy Neutral Quaternary Disinfectant

Manufacturer	W.W. Grainger, Inc.
Manufacturer P/N	2CXC1
EPA #	5736-104-84533

Tough Guy Neutral Quaternary Disinfectant	
pH	10.2
Active Ingredient	Dimethyl Benzyl Ammonium Chloride, Didecyl Dimethyl Ammonium Chloride, Ethyl Alcohol
Health*	3
Fire*	0
Reactivity*	0
Comments	Hospital-grade germicidal disinfectant cleaner and deodorant, lemon fragrance Flash point 200F Dilution 1:256 OSHA compliant

Ramsey FreQuency 256	
Manufacturer	Diversey, Inc.
Manufacturer P/N	2RV11
EPA #	47371- 129-69920
pH	7.2 – 8.2
Active Ingredient	Dimethyl Benzyl Ammonium Chloride, Didecyl Dimethyl Ammonium Chloride, Ethyl Alcohol
Health*	3

Ramsey FreQuency 256	
Fire*	0
Reactivity*	0
Comments	Ramsey is part of JohnsonDiversey (maker of Virex) Flash point 187F Dilution 1:64 OSHA compliant

Disinfection for Bloodeborne Pathogens

Bloodborne pathogens are disease-causing microorganisms that are carried in a host's blood, and are transmitted from one host to another through contact with infected blood, tissue, or body fluids.

These pathogens have been identified by the Centers for Disease Control and Prevention (CDC). The CDC is a U.S. federal agency which is responsible for protecting public health and safety by providing information to enhance health decisions and by developing and applying disease prevention and control. The CDC has identified the following pathogens as posing the greatest risk:

- Human Immunodeficiency Virus (HIV), which causes Acquired Immunodeficiency Syndrome (AIDS; a condition in humans in which the immune system begins to fail)
- Two of the Hepatitis virus:
 - Hepatitis B (HBV)
 - Hepatitis C (HCV)

The level of infection control to use depends on the type of medical equipment.

References

For additional information on cleaners and cleaning practices, refer to the list of references.



The following references are available as of the publication of this document. Links may change over time. Check with each organization for more information.

Ramutkowski, Barrie, Keller, & Abel (1999). Clinical Procedures. McGraw-Hill. pp. 25. ISBN 0-02- 802443-5

American Journal of Infection Control, <https://www.sciencedirect.com/science/article/pii/S0196655315000759>

CDC Guidelines on Cleaning, Disinfections, and Sterilization of Medical Equipment,
<https://www.cdc.gov/infectioncontrol/guidelines/disinfection/index.html>

US Department of Labor, Bloodborne Pathogens, <https://www.osha.gov/html/faq-bbp.html>

Selected EPA-Registered Disinfectants, <http://www.epa.gov/oppad001/chemregindex.htm>