



PRODUCT DATA SHEET

SERVICIDE 10

EPA Reg. No. 10324-194-72714

SERVICIDE 10 is a broad spectrum, one-step, hard surface cleaner, deodorizer, disinfectant, food contact sanitizer and virucide developed by Aquaserve/Xerox and distributed by LiquidTech Chemicals. When used as directed, this product will deliver effective biocidal action against bacteria and viruses. This formulation is a blend of a fifth generation quat (i.e. blend of didecyl dimethyl ammonium chloride and n-alkyl (50% C14, 40% C12, 10% C16) dimethyl benzyl ammonium chloride) and water. Peak biocidal performance is attained when this product is properly diluted 1.5 oz. per gallon of water (or equivalent use dilution) (1150 ppm active). **SERVICIDE 10** can be used to sanitize food contact surfaces such as countertops, glasses and utensils as well as to disinfect a wide range of non-porous hard surfaces such as floors, walls and countertops. At peak bioicide performance, **SERVICIDE 10** meets EPA's criteria for use against SARS-CoV-2, the virus that causes COVID-19 in the presence of 400 ppm hard water and 5% soil.

SERVICIDE 10 can be sold as either a General Disinfectant, Disinfectant, Virucide, Sanitizer for Food Contact Sanitizer, Cleaner, Deodorizer or any combination of the aforementioned product types. Each product type is supported by data derived from elaborate testing that must meet the criteria set out by respective protocols.

SERVICIDE 10 can be used in the following applications*:

- **Hospital or Medical Environment Disinfectant**
 - One-Step General Hospital Medical Disinfectant, Virucide, Deodorizer, Cleaner
 - Cleaning & Disinfecting Hard, Non-Porous Surfaces on Personal Protective Equipment
- **Food Contact Sanitizer**
 - Food Processing Equipment
 - Food Processing Facilities
 - Food Processing Locations
 - Utensils, Dishes, Silverware, Countertops
 - Ice machines, water coolers/tanks
 - Water softeners, ultra-filtration and reverse osmosis units.
 - Beverage
 - Conveyor Belts
 - Glove dip / spray
- Animal Premise Disinfectant/Virucide
- Fogging in Food Premises
- Barber/Salon Equipment Disinfectant/Virucide
- Restroom/Bathroom Disinfectant/Cleaner
- Toilet bowls and urinals
- Tubs, shower stalls, sinks and faucets
- Shower rooms, locker rooms
- **General cleaner and/or deodorizer**
 - Garbage cans / receptacles, trucks and handling equipment
 - Automobiles
 - Waterbed conditioner
 - Pets
- Carpet Cleaning
- Disinfecting bagless vacuum cleaners

* Consult Product Information Bulletin for additional use directions and claims.

Dilution Table for **SERVICIDE 10**

Type of Application	Dilution	Active (ppm)	Contact Time
General or Broad Spectrum Disinfectant	1.5 oz./gal.	1150	10 minutes
Hospital or Medical Environment Disinfectant	1.5 oz./gal.	1150	10 minutes
Public Health Virucidal	1.5 oz./gal.	1150	10 minutes
Animal Virucidal	1.5 oz./gal.	1150	10 minutes
Food Contact Surface Sanitizing	0.75 oz./4 gal.	150	1 minute
Food Contact Surface Sanitizing	1 oz./4 gal.	200	1 minute
Food Contact Surface Sanitizing	2 oz./4 gal.	400	1 minute
Elevated Temperature Food Contact Surface Sanitizing	1 oz./10 gal.	80	1 minute
Food Contact Surface Sanitizing on Cold Surfaces	1.25 oz./4 gal	250	1 minute

TYPICAL PROPERTIES

Physical Form.....	Liquid
Appearance.....	Colorless to light yellow
Color.....	100 max.
Water Solubility.....	Miscible
% Active (Quat).....	9.5 – 10.5
Flash Point.....	> 212.0°F (100°C)
Boiling Point.....	212°F (100°C)
Viscosity @ 21°C (Brookfield).....	11.62 mm ² /s (cSt)
Specific Gravity @ 22°C.....	0.98 – 1.00 (0.988)
pH.....	6.0 – 8.0
RVOC (U.S. EPA), %.....	1.5 (estimated, Ethanol)

EFFICACY INFORMATION

Disinfection Performance

SERVICIDE 10 kills the following bacteria in 10 minutes at 1.5 oz. per gallon (1150 ppm active) in the presence of 400 ppm hard water and 5% soil at room temperature (20.0°C) on hard, non-porous surfaces:

Pseudomonas aeruginosa (ATCC 15542)
Salmonella enterica (ATCC 10708)
Staphylococcus aureus (ATCC 6538)

All lots of **SERVICIDE 10** satisfied the established test criteria for general disinfection using AOAC Germicidal Spray Method. **SERVICIDE 10** meets EPA standards (Subdivision G, 91-2) for hard surface general disinfectant claims that can be used by products sold in households, schools, restaurants, food services, dairies, farm, beverage and food processing plants and other non-medical facilities when used as directed.

Hospital or Medical Environment Disinfection Performance

SERVICIDE 10 kills the following bacteria in 10 minutes at 1.5 oz. per gallon (1150 ppm active) in the presence of 400 ppm hard water and 5% soil at room temperature (20.0°C) on hard, non-porous surfaces:

Pseudomonas aeruginosa (ATCC 15542)
Staphylococcus aureus (ATCC 6538)

All lots of **SERVICIDE 10** satisfied the established test criteria for general disinfection using AOAC Germicidal Spray Method. **SERVICIDE 10** meets EPA standards (Subdivision G, 91-2) for hard surface general disinfectant claims that can be used by products sold in hospitals, households, healthcare facilities, schools, restaurants, food services, dairies, farm, beverage and food processing plants and other medical facilities when used as directed.

Virucidal Performance

SERVICIDE 10 kills the following viruses in 10 minutes at 1.5 oz. per gallon (1150 ppm active) in the presence of 400 ppm hard water and 5% soil at room temperature (20.0°C) on hard, non-porous surfaces:

Avian Influenza A Virus (H5N1) (CDC 2006719965)
Human Coronavirus (VR-740)
Human Immunodeficiency Virus Type 1 (HIV-1) (AIDS Virus) (HTLV-III_B)

SERVICIDE 10 satisfies the established test criteria required by the U.S. EPA for virucidal label claims. **SERVICIDE 10** meets EPA standards (OCSP 810.2200) for hard surface virucidal claims that can be used by products sold in hospitals, households, healthcare facilities, schools, restaurants, food services, dairies, farm, beverage and food processing plants and other medical facilities when used as directed. As a result, the parent product Maquat 2420-10% can be found on several EPA lists of effective virucides:

List C: EPA's Registered Antimicrobial Products Effective Against Human HIV-1 Virus
List M. Registered Antimicrobial Products with Label Claims for Avian (Bird) Flu Disinfectants
List N: Disinfectants for Use Against SARS-CoV-2

SERVICIDE 10 meets EPA's criteria for use against SARS-CoV-2, the virus that causes COVID-19.

Animal Premise Virucidal Performance

SERVICIDE 10 kills the following viruses in 10 minutes at 1.5 oz. per gallon (1150 ppm active) in the presence of 400 ppm hard water and 5% soil at room temperature (20.0°C) on hard, non-porous surfaces:

Avian Influenza A Virus (H5N1) (CDC 2006719965)

SERVICIDE 10 satisfied the established test criteria for a virucide. **SERVICIDE 10** meets EPA standards (Subdivision G, 91-2) for hard surface virucidal claims that can be used by products sold in kennels, households, veterinarian facilities, schools, dairies, farms, zoos and other facilities that housed animals when used as directed.

Food Contact Surface Sanitizing Performance

SERVICIDE 10 is an effective food contact sanitizer in 1 minute at 1 oz. per 4 gallons (200 ppm active) in the presence of 500 ppm hard water on hard, non-porous surfaces:

Aeromonas hydrophila (ATCC 23213)
Cronobacter sakazakii (ATCC 29544)
Enterococcus faecalis Vancomycin Resistant (VRE) (ATCC 51299)
Escherichia coli (ATCC 11229)
Escherichia coli O111:H8 (ATCC BAA-184)
Escherichia coli O157:H7 (ATCC 35150)
Klebsiella pneumoniae (ATCC 4352)
Listeria monocytogenes (ATCC 19117)
Salmonella enterica serotype *enteritidis* (ATCC 4931)
Salmonella enterica serotype *enteritidis* (ATCC 4931)
Salmonella enterica subspecies *enterica* serovar *Typhi* (ATCC 6539)

Shigella dysenteriae (ATCC 11835)
Staphylococcus aureus (ATCC 6538)
Staphylococcus aureus Community Associated Methicillin Resistant (CA-MRSA) USA 300 (Erythromycin, Methicillin, Oxacillin, Penicillin, Tetracycline Resistant) (Multi-Drug Resistant) (MDR) (NARSA NRS 384)
Staphylococcus aureus Community Associated Methicillin Resistant (CA-MRSA) USA 400 (NARSA NRS 123)
Staphylococcus aureus MRSA (Clindamycin, Erythromycin, Oxacillin, Methicillin, Penicillin, Tetracycline Resistant) (Multi-Drug Resistant) (MDR) (ATCC 33592)
Streptococcus pyogenes (ATCC 12344)
Yersinia enterocolitica (ATCC 23715)
Shigella dysenteriae (ATCC 11835)
Staphylococcus aureus (ATCC 6538)

Elevated Temperature Food Contact Surface Sanitizing Performance

At 120°F, **SERVICIDE 10** is an effective food contact sanitizer in 1 minute at 1 oz. per 10 gallons (80 ppm active) in the presence of 500 ppm hard water on hard, non-porous surfaces:

Escherichia coli (ATCC 11229)
Staphylococcus aureus (ATCC 6538)

Food Contact Surface Sanitizing Performance on Cold Surfaces

SERVICIDE 10 is an effective food contact sanitizer on cold surfaces ($\geq 38^\circ\text{F}$) in 1 minute at 1.25 oz. per 4 gallons (250 ppm active) in the presence of 500 ppm hard water on hard, non-porous surfaces:

Escherichia coli (ATCC 11229)
Staphylococcus aureus (ATCC 6538)

SERVICIDE 10 satisfied the established test criteria for sanitizer for food contact surfaces using AOAC Germicidal and Detergent Sanitizer Method. **SERVICIDE 10** meets EPA standards (OCSP 810.2200) for hard surface sanitizer claims that can be used by products sold in restaurants, food service cafeterias and other facilities that handle food. **SERVICIDE 10** is effective as a Food Contact Sanitizer against the above listed bacteria on hard, non-porous surfaces when used as indicated.

REGULATORY INFORMATION

United States Department of Transportation (DOT):

UN Number: UN1903
UN Proper Shipping Name: DISINFECTANTS, LIQUID, CORROSIVE, N.O.S. (QUATERNARY AMMONIUM COMPOUND)
Hazard Class(es): 8
Packing group (if applicable): PG II

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HANDLING INFORMATION

Refer to and follow the guidelines in the Safety Data Sheet (SDS) available from Aquaserv for information on the safe use, handling and disposal of this product.

STANDARD PACKAGING INFORMATION

SERVICIDE 10 is available in 1-gallon bottles (8 lbs.), 5-gallon pails (40 lbs.), 15-gallon drums (120 lbs.), 30-gallon drums (240 lbs.), 55-gallon drums (440 lbs.) and 275-gallon totes (2,200 lbs.).

This information relates only to the specific material referred to herein and not to its use in combination with any other material or in any process, unless explicitly stated herein. Such information is, to the best of our knowledge and belief, accurate and reliable as of the date compiled; however, no warranty, guarantee or other representation is made as to its accuracy, reliability, or completeness, or regarding any liabilities arising from others' intellectual property rights.

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