

Surface Disinfectant

Quaternary Disinfectant

Surface Disinfectant, EPA Reg # 10324-154-9152, is one step disinfectant, cleaner and deodorizer for hard, non-porous surfaces for use in hospitals, nursing homes, schools, public transportation, cruise ships, athletic facilities and restaurants.

Product is effective in hard water, up to 400ppm of water hardness. Surface Disinfectant is a virucide, mildewstat and fungicide. This product kills the following viruses in 10 minutes at 2 oz. per gal. of 400 ppm hard water (660 ppm active) and 5% soil on hard, non-porous surfaces: Avian Influenza A Virus, Hepatitis B Virus (HBV), Hepatitis C Virus (HCV), Herpes Simplex Virus Type 1, Herpes Simplex Virus Type 2, Human Immunodeficiency Virus Type 1 (HIV 1).

Surface Disinfectant meets EPA criteria for use against SARS-CoV-2, the virus that causes COVID-19. Product kills Coronavirus and Human Coronavirus in 10 minutes at 2 oz. per gallon of 400 ppm hard water and 5% soil on hard, non-porous surfaces.

- EPA registered disinfectant, cleaner and deodorizer
- Effective in hard water up to 400ppm water hardness
- Mildewstatic and fungicidal properties
- No rinse application
- Use on hard, non-porous surfaces
- Meets EPA criteria for use against SARS-CoV-2 that causes COVID-19

Usage Directions: • Before using product, food products and food packaging materials must be removed from area or carefully protected. Apply solution diluted at 2 oz. per gallon of water (660 ppm quat) to precleaned non-porous surface with sponge, brush, cloth, mop, or by immersion.

• For spray applications, spray 6-8 inches from surface. Keep treated surface wet for 10 minutes. Allow to air dry.

• Consult label for a full listing of uses with directed uses and dilution instructions. Test concentration of solution with Quat Check QT-1000 Test Strips.

Safety & Hazards



Wear Protective Eye Glasses and Chemical-Resistant Gloves While Using Surface Disinfectant

Consult SDS for Further Safety Precautions

DOT Shipping Name: Not Regulated

Technical Information:

Appearance: Clear purple liquid
Odor: Lavender
pH: 6.0-8.0
Foam: Moderate Foam

Associated Products:

MG DermaGel 62, 62% Ethanol Hand Sanitizer Gel

MG DermaWash, Antibacterial Hand Soap with Benzalkonium Chloride

Surface Disinfectant	
Dilution Guidelines	
Usage	Dilution
One-step, general, hospital disinfectant	2oz per 1 Gallon Water (660 ppm quat)
General deodorization	2oz - 4oz per 1 Gallon Water (660 -1320 ppm quat)

Titration Kit:

QT-10 and/or Quat
Check 1000, Quaternary Test Strips
See Color Chart on Test Strip Container
MRTK9000-Z, Quaternary Titration
1 Drop= 10ppm

Products Manufactured By:



Product Selection and General Use Chart

Surface Disinfectant

General use

Surface Disinfectant is one step disinfectant, cleaner and deodorizer for hard, non-porous surfaces for use in hospitals, nursing homes, schools, public transportation, cruise ships, athletic facilities and restaurants.

Product is effective in hard water, up to 400ppm of water hardness. Surface Disinfectant is a virucide, mildewstat and fungicide. This product is for use to kill and deactivate viruses similar to the following in 10 minutes at 2 oz. per gal. of 400 ppm hard water (660 ppm active) and 5% soil on hard, non-porous surfaces: Avian Influenza A Virus, Coronavirus, Hepatitis B Virus (HBV), Hepatitis C Virus (HCV), Herpes Simplex Virus Type 1, Herpes Simplex Virus Type 2, Human Coronavirus, Human Immunodeficiency Virus Type 1 (HIV 1).

Usage Directions:

- Before using product, food products and food packaging materials must be removed from area or carefully protected. Apply solution diluted at 2 oz. per gallon of water (660 ppm quat) to precleaned non-porous surface with sponge, brush, cloth, mop, or by immersion.
- For spray applications, spray 6-8 inches from surface. Keep treated surface wet for 10 minutes. Allow to air dry.
- Consult label for a full listing of uses with directed uses and dilution instructions. Test concentration of solution with Quat Check QT-1000 Test Strips.

Dilution Guidelines

Usage	Dilution
One-step, general, hospital disinfectant	2oz per 1 Gallon Water (660 ppm quat)
General deodorization	2oz - 4oz per 1 Gallon Water (660 -1320 ppm quat)

Safety & Hazards



Warning: Read label before use. Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/mist/vapors/spray. Wash hands thoroughly after handling. Wear protective gloves/eye protection. Harmful if swallowed. Causes skin irritation. Causes eye irritation. May cause respiratory irritation.

Product Class: Neutral

Protective Equipment Guide

A			SAFETY EYEWEAR
B			VAPOR RESPIRATOR
C			DUST & VAPOR RESPIRATOR
D			SUPPLIED-AIR RESPIRATOR
E			FULL SUIT
F			BOOTS
G			DUST/MIST RESPIRATOR
H			SAFETY EYEWEAR
I			VAPOR RESPIRATOR
J			DUST & VAPOR RESPIRATOR
K			SUPPLIED-AIR RESPIRATOR
X	Ask Your Supervisor for Special Handling Instructions		

Wear Protective Eye Glasses and Chemical-Resistant Gloves While Using Surface Disinfectant



Letter of Guarantee

Neutral Disinfectant 64

Serene Clean & Pure LLC. guarantees the product Surface Disinfectant complies with the requirements set forth by the USDA FSIS for Nonfood Compounds Category Code D2: Antimicrobial Agents Not Always Requiring A Rinse. The description of Category Code D2 Antimicrobial Agents Not Always Requiring A Rinse is as follows:

Sanitizing solutions may be used on hard non-porous food contact surfaces such as equipment and utensils without a subsequent potable water rinse provided they are formulated in compliance with CFR Title 21, Section 178.1010, and are registered with the U.S. Environmental Protection Agency. The sanitizers must be used under the following conditions:

- a) Such surfaces are thoroughly drained and any collection of liquid removed before contact with food products is made.
- b) The sanitizing solutions are used in accordance with label directions.

Sanitizing solutions described in CFR, Title 21, Section 178.1010 (b), may be used on ceilings, floors, and wall surfaces at concentration considerably higher than those described in CFR, Title 21, Section 178.1010 (c), without a potable water rinse unless such use results in residues which may contaminate food products subsequently processed. The use of antimicrobial solutions or combination cleaner-antimicrobials must be followed by a potable water rinse.

Surface Disinfectant is free from undesirable microorganisms and is guaranteed safe and adequate as Category Code: D2 Antimicrobial Agents Not Always Requiring A Rinse when used as directed. Products manufactured by Serene Clean & Pure LLC. do not contain any of the major allergens that could cause allergic reaction. Major allergens, under FALCPA (Food Allergen Labeling and Consumer Protection Act) are: milk, eggs, Crustacean shellfish, tree nuts, wheat, peanuts and soybeans. Furthermore, Serene Clean & Pure LLC. does not process or store any products which contain known allergens in our plant.

This document serves as a continuing letter of assurance and satisfies the conditions of 21 CFR Section 110.35 and the USDA Sanitation Performance Standards Compliance Guide.

Sincerely,

Original Signed By:

Kishor Pathak

Director of Product Development

Valid through Jan 2018 - Dec 2020

Concentration Verification Procedure

Neutral Disinfectant 64

Procedure No: Quat1

Procedure Name: Quaternary Test Strips

Test Kit No: QT-10 and/or Quat
Check 1000

Factor: See Color Chart on Test Strip
Container

Purpose:

To estimate ppm of active quaternary ammonia sanitizer

Required Components:

- 1) QT-10 for 0-200 ppm; or
- 2) Quat Check 1000 Test Strips for 0-1000 ppm

Procedure

- 1) The temperature of the test solution should be at room temperature. (Ideally 65°F - 75°F)
- 2) The pH of the solution should be at or below 7.5
- 3) Immerse a strip of the test paper in a still bath of solution. (Solution should not be agitated or moving)
- 4) Keep the test paper immersed in the solution for ten seconds.
- 5) Match the color of the test paper with the color chart.

All of the above conditions must be adhered to. Deviations from the above conditions, such as, elevated temperatures; immersion in an agitating or moving solution, variance in immersion time; or pH of solution above 7.5 may cause erroneous results.



Neutral Disinfectant 64

Factor: See Color Chart on Test Strip Container

[illegible]

Concentration Verification Procedure

Surface Disinfectant

Procedure No: Quat2

Procedure Name: Quaternary Titration

Test Kit No: MRTK9000-Z

Factor: 1 Drop= 10ppm

Purpose:

To measure ppm of active quaternary ammonia sanitizer

Required Components:

- 1) 10 mL Vial
- 2) Complexing Agent (MRCO3300)
- 3) Phenolphthalein Solution (MRPH1605)
- 4) Sulfuric Acid 0.5N (MRSA1590)
- 5) Toluidine Blue O Indicator (MRTB3800)
- 6) QAC DT (MRQA3500)

Procedure

- 1) Rinse vial 3 times with solution to be tested.
- 2) Fill vial to the 5 mL mark with sample.
- 3) Add 2 drops of Complexing Agent (MRCO3300). Swirl to mix.
- 4) Add 3 drops of Phenolphthalein Indicator (MRPH1605). Swirl to mix. If the solution stays colorless, go to step 5. If the solution turns pink-red, add Sulfuric Acid 0.5N (MRSA1590) drop-wise while swirling until the sample turns colorless.
- 5) Add 2 drops of Toluidine Blue O Indicator (MRTB3800) and swirl to mix. The sample will turn blue.
- 6) Add QAC DT (MRQA3500) drop-wise while swirling until the sample color changes from blue to purple-pink. Record the number of drops.
- 7) Multiply the number of drops by factor to get ppm.



Surface Disinfectant

Factor: 1 Drop= 10ppm

Cleaning and Sanitation Specialists | USDA and EPA Approved Chemicals | Dilution Control | Engineering Sales and Service | Process Instrumentation

1. PRODUCT AND COMPANY IDENTIFICATION

Product Code: Surface Disinfectant
Product Name:
Company Name: Serene Clean & Pure LLC. **Phone Number:** +1 (424) 329-2515
Emergency Contact: Chemtrec

2. HAZARDS IDENTIFICATION

Acute Toxicity: Oral, Category 4
Skin Corrosion/Irritation, Category 1A
Serious Eye Damage/Eye Irritation, Category 2A



GHS Signal Word: **Danger**
GHS Hazard Phrases: Harmful if swallowed.
 Causes severe skin burns and eye damage.
GHS Precautionary Phrases: Keep out of reach of children.
 Read label before use.
 Do not get in eyes, on skin, or on clothing.
 Do not breathe dust/fume/gas/mist/vapors/spray.
 Wash hands thoroughly after handling.
 Wear protective gloves/protective clothing/eye protection.
GHS Response Phrases: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with plenty of water for 15 minutes.
 Get immediate medical advice/attention.
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 If experiencing respiratory symptoms: Get immediate medical advice/attention.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for 15 minutes.
 Get immediate medical advice/attention.
 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 Get immediate medical advice/attention.
GHS Storage and Disposal Phrases: Dispose of contents/container in accordance to local, state and federal regulations.
OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.
Inhalation: Harmful if inhaled. May cause respiratory tract irritation.
Skin Contact: May cause a burning sensation of the skin. May be harmful if absorbed through the skin.
Eye Contact: May cause eye irritation and burns.
Ingestion: May be harmful if swallowed. May cause gastrointestinal irritation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Hazardous Components (Chemical Name)	Concentration
7173-51-5	1-Decanaminium, N-Decyl-N,N-dimethyl-, chloride	< 3.0 %
68424-85-1	Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	< 2.0 %

4. FIRST AID MEASURES

Emergency and First Aid Procedures:

In Case of Skin Contact:	Flush skin with plenty of water. Get medical aid if irritation develops or persists.
In Case of Eye Contact:	Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical aid immediately.
In Case of Ingestion:	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. If victim is conscious and alert, give 2-4 cupfuls of water. Get medical attention immediately.
Note to Physician:	Treat symptomatically and supportively. Show this safety data sheet to the doctor in attendance.

5. FIRE FIGHTING MEASURES

Flash Pt:	No data.
Explosive Limits:	LEL: No data. UEL: No data.
Autoignition Pt:	No data.
Suitable Extinguishing Media:	Use water spray, dry chemical, carbon dioxide, or chemical foam.
Fire Fighting Instructions:	As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Use water spray to keep fire-exposed containers cool.
Flammable Properties and Hazards:	No data available.
Hazardous Combustion Products:	No data available.

6. ACCIDENTAL RELEASE MEASURES

Protective Precautions, Protective Equipment and Emergency Procedures:	Use proper personal protective equipment as indicated in Section 8.
Environmental Precautions:	Do not let this chemical enter the environment. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section.
Steps To Be Taken In Case Material Is Released Or Spilled:	Provide ventilation. Do not get water on spilled substances or inside containers. Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container.

7. HANDLING AND STORAGE

Precautions To Be Taken in Handling:	Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Keep container tightly closed.
Precautions To Be Taken in Storing:	Store in a cool, dry, well-ventilated area away from incompatible substances. Store in a tightly closed container.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
7173-51-5	1-Decanaminium, N-Decyl-N,N-dimethyl-, chloride	No data.	No data.	No data.
68424-85-1	Quaternary ammonium compounds,benzyl-C12-16-alkyldimeth yl, chlorides	No data.	No data.	No data.

Respiratory Equipment (Specify Type): Respiratory protection is not required under normal use.

Eye Protection: Wear chemical splash goggles.

Protective Gloves: Wear appropriate protective gloves to prevent skin exposure. Rubber or neoprene gloves.

Other Protective Clothing: Wear appropriate protective clothing to prevent skin exposure.

Engineering Controls (Ventilation etc.): No data available.

Work/Hygienic/Maintenance Practices: Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical States: [] Gas [X] Liquid [] Solid

Appearance and Odor: Purple. Clear. Liquid.

pH: 6.8 - 8.0

Melting Point: No data.

Boiling Point: No data.

Flash Pt: No data.

Evaporation Rate: No data.

Flammability (solid, gas): No data available.

Explosive Limits: LEL: No data. UEL: No data.

Vapor Pressure (vs. Air or mm Hg): No data.

Vapor Density (vs. Air = 1): No data.

Specific Gravity (Water = 1): 0.995 - 1.010

Solubility in Water: No data.

Octanol/Water Partition Coefficient: No data.

Autoignition Pt: No data.

Decomposition Temperature: No data.

Viscosity: No data.

10. STABILITY AND REACTIVITY

Reactivity: High temperatures and fire conditions can result in the formation of carbon monoxide and carbon dioxide.

Stability: Unstable [] Stable [X]

Conditions To Avoid - Instability: Incompatible materials, ignition sources.

Incompatibility - Materials To Avoid: Strong oxidizing agents.

Hazardous Decomposition or Byproducts: No data available.

Possibility of Hazardous Reactions: Will occur [] Will not occur [X]

Conditions To Avoid - Hazardous Reactions: No data available.

11. TOXICOLOGICAL INFORMATION

Toxicological Information:

Epidemiology: No data available.
 Teratogenicity: No data available.
 Reproductive Effects: No data available.
 Mutagenicity: No data available.
 Neurotoxicity: No data available.

Carcinogenicity/Other Information:

CAS# 7173-51-5: 1-Decanaminium, N-Decyl-N,N-dimethyl-, chloride: Acute toxicity, LD50, Oral, Rat, 84.00 MG/KG.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Carcinogenicity:		NTP? No	IARC Monographs? No	OSHA Regulated? No		
CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA	
7173-51-5	1-Decanaminium, N-Decyl-N,N-dimethyl-, chloride	n.a.	n.a.	n.a.	n.a.	
68424-85-1	Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	n.a.	n.a.	n.a.	n.a.	

12. ECOLOGICAL INFORMATION

General Ecological Information:

 Environmental: No information available.
 Physical: No information available.

CAS# 7173-51-5: 1-Decanaminium, N-Decyl-N,N-dimethyl-, chloride: 100% mortality or 0% survival of organism., Rainbow Trout (*Oncorhynchus mykiss*), juvenile(s), 500.0 UG/L, 96 H, Mortality.
 LC50, Water Flea (*Daphnia magna*), 1000. UG/L, 6 H, Mortality.
 LC50, Guppy (*Poecilia reticulata*), 750.0 UG/L, 24 H, Mortality.
 LC50, Medaka, High-Eyes (*Oryzias latipes*), 950.0 UG/L, 72 H, Mortality.
 LC50, Opossum Shrimp (*Americamysis bahia*), juvenile(s), 39.00 UG/L, 48 H, Mortality.
 LC50, Zebra Mussel (*Dreissena polymorpha*), 1120. UG/L, 48 H, Mortality.
 Effective concentration to 50% of test organisms., Green Algae (*Chlorella pyrenoidosa*), Exponential Growth Phase, 59.00 UG/L, 24 H, Growth.
 CAS# 68424-85-1: Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides: LC50, Fathead Minnow (*Pimephales promelas*), 0.770 PPM, 96 H, Mortality.
 LC50, Rainbow Trout (*Oncorhynchus mykiss*), 923.2 PPB, 96 H, Mortality.
 LC50, Striped Bass (*Morone saxatilis*), fry, 14100. UG/L, 96 H, Mortality.
 Effective concentration to 50% of test organisms., Green Algae (*Chlorella pyrenoidosa*), Exponential Growth Phase, 670.0 UG/L, 96 H, Population.

Persistence and Degradability:

No data available.

Bioaccumulative Potential:

No data available.

Mobility in Soil:

No data available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

14. TRANSPORT INFORMATION

LAND TRANSPORT (US DOT):
DOT Proper Shipping Name: Not Regulated.

DOT Hazard Class:
UN/NA Number:

15. REGULATORY INFORMATION

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
7173-51-5	1-Decanaminium, N-Decyl-N,N-dimethyl-, chloride	No	No	No
68424-85-1	Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	No	No	No

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Explosive	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Acute toxicity (any route of exposure)
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Flammable (gases, aerosols, liquid, or solid)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Skin Corrosion or Irritation
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Oxidizer (liquid, solid or gas)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Serious eye damage or eye irritation
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Self-reactive	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Respiratory or Skin Sensitization
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Pyrophoric (liquid or solid)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Germ cell mutagenicity
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Pyrophoric gas	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Carcinogenicity
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Self-heating	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Reproductive toxicity
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Organic peroxide	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Specific target organ toxicity (single or repeated exposure)
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Corrosive to metal	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Aspiration Hazard
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Gas under pressure (compressed gas)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Simple Asphyxiant
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	In contact with water emits flammable gas	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	(Health) Hazard Not Otherwise Classified (HNOC)
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Combustible Dust		
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	(Physical) Hazard Not Otherwise Classified (HNOC)		

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
7173-51-5	1-Decanaminium, N-Decyl-N,N-dimethyl-, chloride	CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: No; MA Oil/HazMat: No; MI CMR, Part 5: No; NJ EHS: No; NY Part 597: No; PA HSL: No
68424-85-1	Quaternary ammonium compounds,benzyl-C12-16-alkyldimethyl, chlorides	CWA NPDES: No; TSCA: Yes - Inventory, 4 Test; CA PROP.65: No; CA TAC, Title 8: No; MA Oil/HazMat: No; MI CMR, Part 5: No; NJ EHS: No; NY Part 597: No; PA HSL: No

16. OTHER INFORMATION

Revision Date: 07/02/2019

Additional Information About No data available.

This Product:

Company Policy or

Disclaimer:

While Serene Clean & Pure believes the statements set forth herein are accurate as of the date hereof, Serene Clean & Pure makes no warranty with respect thereto and expressly disclaims all liability for reliance thereon. Such data is offered solely for your consideration, investigation, and verification.