

SAFETY DATA SHEET

Conforms to the requirements of the United States Hazard Communication regulation 29 CFR 1910.1200

1.	Identification of the substance/mixture and of the company/undertaking										
1.1	Product identifier Trade name: Benzalkonium Chloride – 50% INCI Name: Benzalkonium chloride solution										
1.2	Relevant identified uses of the substance or mixture and uses advised against Uses of the Substance/Mixture: Topical antimicrobial, (for further information refer to the product technical datasheet)										
1.3	Details of the Supplier of the Safety Data Sheet Silver Fern Chemical, Inc. 121 W. De La Guerra Street, Suite B Santa Barbara, CA 93101 USA Customer Service: Phone: +1-866-282-3384 Email Address - info@silverfernchemical.com; Website - www.silverfernchemical.com										
1.4	Emergency Telephone Number: Infotrac: 800-535-5053; Outside USA & Canada: 352-323-3500										
2.	Hazards identification										
2.1	Emergency overview Appearance: Pale amber liquid with characteristic odor Precautionary statements: Causes severe skin burns and eye damage. Harmful if swallowed. Toxic to aquatic life. Avoid contact with eyes. Do not ingest. Wash thoroughly after handling. Avoid contact of spilled material with runoff with soil and surface waterways. GHS classification <table data-bbox="324 850 836 978"> <tr> <td>Health</td><td></td></tr> <tr> <td>Acute toxicity (oral)</td><td>Category 4</td></tr> <tr> <td>Acute toxicity (dermal)</td><td>Category 4</td></tr> <tr> <td>Skin corrosion/irritation</td><td>Category 1B</td></tr> <tr> <td>Eye damage/irritation</td><td>Category 1</td></tr> </table>	Health		Acute toxicity (oral)	Category 4	Acute toxicity (dermal)	Category 4	Skin corrosion/irritation	Category 1B	Eye damage/irritation	Category 1
Health											
Acute toxicity (oral)	Category 4										
Acute toxicity (dermal)	Category 4										
Skin corrosion/irritation	Category 1B										
Eye damage/irritation	Category 1										
2.2	GHS label elements, including precautionary statements Hazardous products: CAS#68424-85-1 Quaternary ammonium compounds, benzyl-C12-C16 alkyldimethyl, chlorides										
Hazard pictograms/symbols											
Signal Word:	DANGER										
Hazard Statements:	H302: Harmful if swallowed H312: Harmful in contact with skin H314: Causes severe skin burns and eye damage H401: Toxic to aquatic life										
Precautionary Statements:	Prevention P260: Do not breathe mists P262: Do not get in eyes, on skin, or on clothing P264: Wash affected areas thoroughly after handling P270: Do not eat, drink or smoke when using this product P280: Wear protective gloves and eye, face and foot protection Response P301+P312+P330+P331: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell. Do NOT induce vomiting. P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310: Immediately call a POISON CENTER or doctor/physician P363: Wash contaminated clothing before reuse Storage/ Disposal P405: Store locked up P501: Dispose of contents and container to an approved waste disposal plant										
2.3	Other hazards No information available										



**3. Composition/information on ingredients****3.1 Information on components and impurities**

Chemical name	CAS number(s)	GHS Classification	Concentration, %
Quaternary ammonium compounds, benzyl-C12-C16 alkyldimethyl, chlorides	68424-85-1 Alt. (8001-54-5) (68391-01-5) (63449-41-2)	Eye damage/irritation: Category 1, Skin corrosion/irritation: Category 1B, Acute toxicity (oral): Category 3, Acute toxicity (dermal): Category 3; H301, H314, H318	≥47.5-≤52.5
Water	7732-18-5	Not classified	Balance

4. First aid measures**4.1 Description of first-aid measures**

- General advice: Show this material safety data sheet to medical personnel. Do not leave affected person unattended. Isolate exposed apparel for laundry before re-use.
- Eye contact: Rinse eyes with water. Remove any contact lenses, and continue flushing eyes with running water for at least 15 minutes. Hold eyelids apart to ensure rinsing of the entire surface of the eyes and lids with water. Seek medical attention if irritation develops or persists.
- Skin contact: Take off contaminated clothing and shoes immediately. Wash affected areas with plenty of water. Seek medical attention if irritation develops or persists.
- Ingestion: Do NOT induce vomiting. Do not give anything by mouth to an unconscious or convulsing person. Rinse mouth with water. Seek medical attention.
- If inhaled: Remove from area to fresh air. Seek medical attention if respiratory irritation develops or if breathing becomes difficult.

4.2 Most important symptoms and effects, both acute and delayed

- Risks: The most important known symptoms and effects are described in the labeling (section 2.2) and/or in section 11. Corrosive effects. Symptoms may include stinging, tearing, redness, swelling and blurred vision. Permanent eye damage including blindness could result. Prolonged or repeated skin contact may aggravate existing skin conditions. Inhalation of mists may aggravate existing chronic respiratory conditions such as asthma, emphysema or bronchitis.

4.3 Indication of any immediate medical attention and special treatment needed

- Note to physician: All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. Treat symptomatically.

5. Firefighting measures

Flash Point and Method: None

5.1 Extinguishing media

- Suitable extinguishing media: The product is not flammable
Use media suitable for the material that is burning
- Unsuitable extinguishing media: No data available

5.2 Special hazards arising from the substance or mixture

- Special hazards during fire fighting: Container may rupture on heating
- On combustion or on thermal decomposition: May include carbon oxides, nitrogen oxides

5.3 Advice for firefighters

- Special protective equipment for firefighters: As in any fire, wear NIOSH/MSHA approved, pressure-demand self-contained breathing apparatus and full protective gear.
- Specific firefighting methods: No special methods required. Move containers from area if it can be done without risk. Cool fire-exposed containers with water from side. Contain the extinguishing fluids by diking.

6. Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Spill area may be slippery. Wear appropriate protective equipment (See Section 8).

6.2 Environmental precautions

Avoid contact of spilled material and runoff with soil and surface waterways

6.3 Methods and material for containment and cleaning up

- Recovery: Stop leak if safe to do so. Absorb spills with vermiculite, fuller's earth, or sand. Shovel up and place in a non-metal waste container for disposal. Dike large spills with soil or sandbags to contain it and prevent its spread. Keep in suitable, properly labeled, closed containers for disposal.

Decontamination/cleaning: Wash non-recoverable remainder with large amounts of water. Clean contaminated surfaces thoroughly. Recover the cleaning water for subsequent disposal.

Disposal: Dispose of in accordance with local regulations

Additional advice: Spill area may be slippery

6.4 Reference to other sections

No information available



Handling and storage

7.1 Precautions for safe handling

Technical measures:

Advice on safe handling and usage:

Does not require any specific or particular measures

Wear appropriate protective equipment including long chemical resistant gloves, chemical splash goggles and protective footwear. Handle in accordance with good industrial hygiene and safety practice. Do not spray toward face. Wash affected areas after use. Do not taste or swallow. Avoid breathing vapors or mists. Use only with adequate ventilation. Product residue may remain on/in empty containers. All precautions for handling the product must be used in handling the empty container and residue. FOR COMMERCIAL AND INDUSTRIAL USE ONLY.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures for storage:

Does not require any specific or particular measures

Storage class (TRGS 510): Non-combustible, corrosive materials

Storage conditions

Recommended:

Keep container tightly closed. Opened containers must be carefully resealed and kept upright to prevent leakage.

Incompatible products:

Hazardous reactions may occur on contact with certain chemicals. Refer to the list of incompatible materials section 10: "Incompatible materials"

7.3 Specific end use(s)

No information available

8. Exposure controls/personal protection

Introductory remarks:

These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment and piping systems for maintenance and repairs. Waste resulting from these procedures should be handled in accordance with Section 13: Disposal considerations.

Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers

8.1 Control parameters

Components with workplace control parameters

Components	Value	Control parameters	Basis
Contains no substances with occupational exposure limit values			

8.2 Exposure controls

Control measures

Engineering measures:

Good general ventilation should be sufficient to control airborne levels. Respiratory protection is not required if good ventilation is maintained.

Personal protective equipment

Respiratory protection:

In operations where mists are generated, wear a NIOSH/MSHA approved respirator that has been selected by a technically qualified person for the specific work conditions.

Hand protection:

Wear long chemical resistant gloves. Observe instructions regarding permeability and breakthrough time provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion and contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye protection:

Wear chemical splash goggles.

Skin and body protection:

Wear footwear protecting against chemicals, and impervious clothing. Choose body protection according to the amount and concentration of the substances in the workplace.

Hygiene measures:

Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material:

- 1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
- 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
- 3) Wash exposed skin promptly to remove accidental splashes or contact with material.

Protective measures:

Ensure that eyewash stations and safety showers are close to the workstation location, and that emergency equipment is immediately accessible with instructions for use.

The protective equipment must be selected in accordance with current local standards and in following proper use instructions from the supplier of the protective equipment.

Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the potential hazards, and/or risks that may occur during use.



9. Physical and chemical properties

Physical and chemical properties listed represent typical properties and should not be considered product specifications. Refer to product Certificate of Analysis for Product Specifications or contact Kumar Organic Products Limited for additional information.

9.1 Information on basic physical and chemical properties

Appearance:	Clear solution
Odor:	Characteristic odor
Odor Threshold:	No information available
pH:	5-9
Freezing point:	No information available
Melting point/range:	No information available
Boiling point/boiling range:	>100°C
Flash point:	Does not flash
Evaporation rate:	No information available
Flammability (solid, gas):	Not applicable
Flammability/Explosive limit:	No information available
Auto-ignition temperature:	No information available
Vapor pressure:	No information available
Vapor density:	No information available
Density:	0.99 g/ml, 8.3 lbs/gal (25°C)
Solubility:	Water solubility: soluble
Solubility in other solvents:	No information available
Partition coefficient: n-octanol/water:	No information available
Thermal decomposition:	No information available
Viscosity:	Low viscosity
Explosive properties:	No information available
Oxidizing properties:	No information available

9.2 Other information

No information available

10. Stability and reactivity

10.1 Reactivity

No information available

10.2 Chemical stability

Stable and non-reactive under normal conditions of use, storage and transport

10.3 Possibility of hazardous reactions

No information available

10.4 Conditions to avoid

No information available

10.5 Incompatible materials

No information available

10.6 Hazardous decomposition products

On combustion or on thermal decomposition: carbon monoxide, aldehydes, flammable hydrocarbon fragments

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral:	LD ₅₀ 344-366 mg/kg
Acute dermal:	LD ₅₀ 1500-3340 mg/kg
Acute inhalation:	No information available
Acute toxicity (other):	No information available

Skin corrosion/irritation

Skin irritation: Corrosive. Causes severe burns

Serious eye damage/eye irritation

Eye irritation: Corrosive. Causes serious eye damage

Respiratory or skin sensitization

Sensitization: Not classified as sensitizing by skin contact

CMR Summary-

Carcinogenicity

Carcinogenicity: This product does not contain any ingredient designated as probable or suspected human carcinogens by IARC, ACGIH

Mutagenicity

Genotoxicity in vitro:	No information available
Genotoxicity in vivo:	No information available

Reproduction and development toxicity

Toxicity to reproduction/fertility:	No information available
Developmental toxicity/teratogenicity:	No information available

Specific Target Organ Toxicity (STOT)

STOT-single exposure:

No information available

STOT-repeated exposure:

No information available

Aspiration toxicity

Aspiration toxicity:

No information available

Other Hazards

No information available

12. Ecological information

12.1 Toxicity

Aquatic toxicity:

Toxic to aquatic life

12.2 Persistence and degradability

Biodegradation:

No information available

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water:

No bioaccumulation is to be expected (log Pow<=4)

Bioconcentration factor (BCF):

No information available

12.4 Mobility in soil

Known distribution to
environmental compartments:

No information available

12.5 Results of PBT and vPvB assessment

No information available

12.6 Other adverse effects

Environmental assessment:

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this product.

13. Disposal considerations

13.1 Waste treatment methods

RCRA Waste Code:

D002 Corrosive waste (undiluted product)

Product disposal:

Observe all applicable federal, state, and local regulations

Packaging:

Remove all residue when emptying

14. Transportation information

14.1 UN Number:

UN 1760

14.2 Dangerous Good Description:

UN 1760 Corrosive liquid, n.o.s. (Quaternary ammonium compounds), 8, II

14.3 Transport hazard class(es):

8

14.4 Packing group:

II

14.5 Environmental hazards:

Marine pollutant

14.6 Special precautions for user:

For personal protection see section 8

NMFC:

44155-3

Freight class:

55

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Notification status (Global Chemical Inventory Compliance):

Country	Regulatory list	Notification
USA	TSCA	Listed or in compliance with the requirements the inventory
	FIFRA	Pesticide Inert Ingredient
	FDA	UNII Code: F5UM2KM3W7
Canada	DSL	Listed or in compliance with the requirements the inventory
Mexico	INSQ	Listed or in compliance with the requirements the inventory
EU	EC/EINECS	Listed or in compliance with the requirements the inventory; 270-325-2
	REACH	List of Registered Substances
		Substances of Very High Concern (SVHC): Not listed
Australia	AICS	Listed or in compliance with the requirements the inventory
China	IECSC	Listed or in compliance with the requirements the inventory
Japan	ENCS	Listed or in compliance with the requirements the inventory; 3-2694
Korea	ECL/AREC	Listed or in compliance with the requirements the inventory; KE-29999
New Zealand	NZIoC	Listed or in compliance with the requirements the inventory
Philippines	PICCS	Listed or in compliance with the requirements the inventory

OSHA Hazard Communication Standard (29 CFR 1910.1200):

Hazardous

CERCLA (RQ)

Ingredient(s)	CAS#	Weight	CERCLA RQ	Section 302 TPQ
Not listed				

SARA/EPCRA Extremely Hazardous Substances (302/304)

Ingredient(s)	CAS#	Weight	RQ	TPQ
Not listed				

SARA Hazard Categories (311/312)

Fire	Reactive	Acute health hazard	Chronic health hazard
No	No	Yes	No

SARA Toxic Substances (313) The following components are subject to SARA Section 313 reporting requirements

Ingredient(s)	CAS#	Weight
Not listed		

CAA (311) Volatile Organic compounds

Ingredient(s)	CAS#	Weight
Not listed		

State regulations

California

Prop 65 Components:

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Carcinogens & Reproductive Toxicity (CRT):

Not listed

CARB Identified Toxic Air Contaminants:

Not listed

SB-258 Cleaning Products Right to Know:

Not listed

15.2

Other regulations

WHMIS Classification

Classified in accordance with Health Canada Hazardous Products Regulations (SOR/2015-17)

Classification: Class D2B: Material causing other toxic effects

Harmonized Tariff Schedule Codes

US Census Bureau Schedule B (2014): 3402.12.0000

Departmental Consolidation of the *Customs Tariff* (2014) (Canada): 3402.12.0000

Chemical Weapons Convention List Schedules I, II & III Chemicals

Not listed

Montreal Protocol (Annexes A, B, C, E)

Not listed

Stockholm Convention on Persistent Organic Pollutants

Not listed

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed

16. Other information

NFPA-Classification		HMIS-Classification	
Health	3 high	Health	3 high
Flammability	0 insignificant	Flammability	0 insignificant
Instability or Reactivity	0 insignificant	Reactivity	0 insignificant
		HMIS PPE	B
		B=Safety glasses, Gloves	

Key or legend to abbreviations and acronyms used in the safety data sheet	
ACGIH: American Conference of Governmental Industrial Hygienists	NIOSH: National Institute for Occupational Safety and Health
HMIS: Hazardous Materials Identification System	NTP: National Toxicology Program
IARC: International Agency for Research on Cancer	OSHA: Occupational Safety and Health Administration
NFPA: National Fire Protection Association	

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