


SECTION 1: PRODUCT IDENTIFICATION

PRODUCT NAME	BENZALKONIUM CHLORIDE SOLUTION, NF (50%)
PRODUCT CODE	0264
SUPPLIER	MEDISCA Inc. Tel.: 1.800.932.1039 Fax.: 1.855.850.5855 626 Tom Miller Road, Plattsburgh, NY, 12901 MEDISCA Pharmaceutique Inc. Tel.: 1.800.665.6334 Fax.: 514.338.1693 4509 Rue Dobrin, St. Laurent, QC, H4R 2L8 MEDISCA Australia PTY LTD Tel.: 1.300.786.392 Fax.: 61.2.9700.9047 Unit 7, Heritage Business Park 5-9 Ricketty Street, Mascot, NSW 2020
EMERGENCY PHONE	CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 NSW Poisons Information Centre: 131 126 National Chemical Emergency Centre 44(0)1235239670
RECOMMENDED USES	Pharmaceutical Manufacturing
RESTRICTIONS ON USE	Not applicable

SECTION 2: HAZARDS IDENTIFICATION

GHS CLASSIFICATION	Flammable Liquid (Category 3) Acute Toxicity - Oral (Category 4) Skin Corrosion (Category 1) Eye Damage (Category 1) Acute Aquatic Toxicity (Category 1)
PICTOGRAM	
SIGNAL WORD	Danger
HAZARD STATEMENT(S)	Flammable liquid and vapor. Harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage. Very toxic to aquatic life.
ADVERSE PHYSIOCHEMICAL, HUMAN HEALTH AND ENVIRONMENTAL EFFECTS	Not Applicable

PRECAUTIONARY STATEMENT(S)
Prevention

Keep away from heat, sparks, open flames and No smoking
 Keep container tightly closed
 Ground/Bond container and receiving equipment
 Use explosion-proof equipment
 Use non-sparking tools
 Take action to prevent static discharges
 Wear protective gloves, protective clothing, eye and face protection.
 Wash hands thoroughly after handling. Do not touch eyes.
 Do not eat, drink or smoke when using this product.
 Do not breathe dust, fume, gas, mist, vapors and spray.
 Avoid release to the environment.

Response

IN CASE OF FIRE: Small fire: Use dry chemical, CO₂ or water spray to extinguish. Large fire: Use dry chemical, CO₂, alcohol resistant foam or water spray to extinguish.
 IF SWALLOWED: Rinse mouth.
 IF ON SKIN (OR HAIR): Take off immediately all contaminated clothing. Immediately rinse skin with water for several minutes. Wash contaminated clothing before reuse.
 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical help; Immediately call a poison center or medical professional.
 COLLECT SPILLAGE.

Storage

Store in a well-ventilated place.
 Keep cool.
 Store locked up.

Disposal

Dispose of contents and/or container in accordance with local regulations.

HMS CLASSIFICATION
Health Hazard

3

Flammability

2

Reactivity

0

Personal Protection

X

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS
CHEMICAL NAME

Not applicable

BOTANICAL NAME

Not applicable

SYNONYM

Not applicable

CHEMICAL FORMULA

Not applicable

CHEMICAL FAMILY

Not available

CAS NUMBER

Not applicable

ALTERNATE CAS NUMBER

Not applicable

MOLECULAR WEIGHT

Not applicable

COMPOSITION

CHEMICAL NAME	CAS NUMBER	EC NUMBER	% BY WEIGHT
BENZALKONIUM CHLORIDE	8001-54-5 (ALT: 68424-85-1)	270-325-2 (ALT: 616-786-9)	45 - <55
ETHANOL	64-17-5	200-578-6	5 - <10

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as health hazards and hence require reporting in this section.

NOTES

Other ingredients below reportable levels (40 - 50 %)

SECTION 4: FIRST-AID MEASURES

IN CASE OF EYE CONTACT	Flush with copious amounts of water for 15 minutes, separating eyelids with fingers. If irritation persists seek medical aid.
IN CASE OF SKIN CONTACT	Wash with soap & water for 15 minutes. If irritation persists seek medical aid.
IF SWALLOWED	Call a physician. Wash out mouth with water. Do not induce vomiting without medical advice.
IF INHALED	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician
MEDICAL ATTENTION AND SPECIAL TREATMENT	Get emergency medical help.
SYMPTOMS CAUSED BY EXPOSURE	Not expected to present a significant hazard under anticipated conditions of normal use.

SECTION 5: FIREFIGHTING MEASURES

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL	Not applicable
FLAMMABLE PROPERTIES	Flammable liquid and vapor.
HAZARDOUS COMBUSTION PRODUCTS	Under fire conditions, hazardous fumes will be present.
SUITABLE & UNSUITABLE EXTINGUISHING MEDIA	Small fire: dry chemical, CO ₂ or water spray. Large fire: dry chemical, CO ₂ , alcohol resistant foam or water spray. Do not get water inside containers. Do not use water jet as an extinguisher as this will spread the fire.
PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS	Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
METHODS & MATERIAL FOR CONTAINMENT	On land, sweep or shovel into suitable containers.
CLEANUP PROCEDURE	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Wear respirator, chemical safety goggles, rubber boots and heavy rubber gloves. Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. Shut off all sources of ignition. Evacuate the area. If necessary, employ water fog to disperse the vapors. Absorb the matter with compatible vermiculite or other absorbing material. Place in a suitable container and retain for disposal. Ventilate and clean the affected area. Do not flush into sewerage system or to drains.
REFERENCE TO OTHER SECTIONS	See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING	Do not inhale. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Wash thoroughly after handling. Store away from incompatible materials, in a well-ventilated area. Eliminate all sources of ignition. Store in accordance with local regulations. Do not store in unlabeled containers. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Use appropriate containment to avoid environmental contamination.
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CONDITIONS FOR SAFE STORAGE

Store away from incompatible materials, in a well-ventilated area. Eliminate all sources of ignition. Store in accordance with local regulations. Do not store in unlabeled containers. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Use appropriate containment to avoid environmental contamination.

STORAGE CONDITIONS

Store in original container, tightly sealed, protected from direct sunlight and moisture.

Preserve in tight containers, and prevent contact with metals.

SECTION 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION
Chemical Name: COMPONENT 1 CAS #: Not applicable

	Country	Limit value-8 hours		Limit value-Short Term		IDLH	REL	Advisory	Notes
		ppm	mg/m ³	ppm	mg/m ³				
OSHA	USA	N/L	N/L	N/L	N/L	N/L	N/L	N/A	N/A
ACGIH	USA	N/L	N/L	N/L	N/L	N/L	N/L	N/A	N/A
NIOSH	USA	N/L	N/L	N/L	N/L	N/L	N/L	N/A	N/A
WEEL	USA	N/L	N/L	N/L	N/L	N/L	N/L	N/A	N/A
HSIS	Australia	N/L	N/L	N/L	N/L	N/L	N/L	N/A	N/A
HSE	UK	N/L	N/L	N/L	N/L	N/L	N/L	N/A	N/A
GESTIS	N/A	N/L	N/L	N/L	N/L	N/L	N/L	N/A	N/A

Chemical Name: COMPONENT 2 CAS #: Not applicable

	Country	Limit value-8 hours		Limit value-Short Term		IDLH	REL	Advisory	Notes
		ppm	mg/m ³	ppm	mg/m ³				
OSHA	USA	N/L	N/L	N/L	N/L	N/L	N/L	N/A	N/A
ACGIH	USA	N/L	N/L	N/L	N/L	N/L	N/L	N/A	N/A
NIOSH	USA	N/L	N/L	N/L	N/L	N/L	N/L	N/A	N/A
WEEL	USA	N/L	N/L	N/L	N/L	N/L	N/L	N/A	N/A
HSIS	Australia	N/L	N/L	N/L	N/L	N/L	N/L	N/A	N/A
HSE	UK	N/L	N/L	N/L	N/L	N/L	N/L	N/A	N/A
GESTIS	Austria	N/L	N/L	N/L	N/L	N/L	N/L	N/A	N/A

N/L = Not listed ; N/A = Not Available

PELs are 8-hour TWAs = Limit value - Eight hours

Ceiling or Short-Term TWA = STEL = Limit value - Short term

EXPOSURE GUIDELINES

Consult local authorities for provincial or state exposure limits. Particulates not otherwise regulated, respirable fraction: 5 mg/m³.

PERSONAL PROTECTIVE EQUIPMENT

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by WHMIS or OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. **Skin:** Wear appropriate gloves to prevent skin exposure. **Clothing:** Wear appropriate protective clothing to minimize contact with skin. **Respirators:** Follow WHMIS or OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. **Thermal Hazards:** For products representing a thermal hazard, appropriate Personal Protective Equipment should be used.

SPECIFIC ENGINEERING CONTROLS

Adequate mechanical ventilation. Fumehood, eye wash station, and safety shower.

BIOLOGICAL MONITORING

Not available

CONTROL BANDING

Not available

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Liquid				
DESCRIPTION	Clear liquid; colorless or slightly yellow unless a color has been added. Has an aromatic odor.				
SOLUBILITY	Soluble in water.				
ODOR	Aromatic odor				
FLAMMABILITY	Flammable liquid and vapor.				
AUTO-IGNITION TEMPERATURE	Not available	BOILING POINT	Not available	DECOMPOSITION TEMPERATURE	Not available
EVAPORATION RATE	Not available	EXPLOSIVE LIMIT	Not available	FLASH POINT	52.2 °C, 125.96 °F (Closed Cup)
log P (OCTANOL-WATER)	-0.31	LOWER FLAMMABLE/EXPLOSIVE LIMIT(S)	Not available	MELTING/FREEZING POINT	Not available
PARTICLE CHARACTERISTICS	Not available	OXIDIZING PROPERTY	Not available	pH	6.2 - 8 (10%)
RELATIVE DENSITY (WATER = 1)	0.97 g/mL; 8.10 lb/gal	SPECIFIC GRAVITY	Not available	UPPER FLAMMABLE/EXPLOSIVE LIMIT(S)	Not available
VAPOR DENSITY (AIR = 1)	Not available	VAPOR PRESSURE	Not available	VISCOSITY	75 cPs (25°C)

The physical data presented above are typical values and should not be construed as a specification.

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY	Not established
CHEMICAL STABILITY	Stable under recommended storage conditions
INCOMPATIBLE MATERIALS	Strong oxidants, metals, strong bases, acid anhydrides, acid chlorides. Benzalkonium chloride is incompatible with soaps and other anionic surfactants, citrates, iodides, nitrates, permanganates, salicylates, silver salts, tartrates, and zinc oxide and sulfate. Incompatibilities have been demonstrated with ingredients of some commercial rubber mixes or plastics. Incompatibilities have also been reported with other substances including aluminium, cotton dressings, fluorescein sodium, hydrogen peroxide, hypromellose, kaolin, hydrous wool fat, and some sulfonamides.
HAZARDOUS DECOMPOSITION PRODUCTS	Toxic fumes of carbon monoxide, carbon dioxide, nitrogen oxides and other gases may occur
HAZARDOUS POLYMERIZATION	Will not occur
POSSIBILITY OF HAZARDOUS REACTION	Not established
CONDITIONS TO AVOID	Moisture, sunlight and extreme temperatures Prevent contact with metals.

SECTION 11: TOXICOLOGICAL INFORMATION
ACUTE TOXICITY

BENZALKONIUM CHLORIDE SOLUTION (50%) :
 Oral: Rat: LD50: (mg/kg): 305
 Dermal: Rabbit: LD50: (mg/kg): > 2000
 Inhalation: Rat: LC50: (mg/L/4hr): Not available

SKIN CORROSION/IRRITATION

Causes severe skin burns.
 Skin irritancy test: 5% benzalkonium chloride solution: Guinea pig: Necrosis of epidermis.

SERIOUS EYE DAMAGE/EYE IRRITATION

Causes severe eye burns. Causes serious eye damage.
 Eye irritancy test, 10% benzalkonium chloride solution: Monkey: Corneal clouding; epithelial hyperplasia after 21 days.
 Eye irritancy test: 10% benzalkonium chloride solution: Rabbit: Corneal damage.

RESPIRATORY SENSITIZATION

Due to lack of data the classification is not possible.
 Asthma and contact dermatitis following occupational exposure to this material have been reported.

SKIN SENSITIZATION

Due to lack of data the classification is not possible.
 Asthma and contact dermatitis following occupational exposure to this material have been reported.

GERM CELL MUTAGENICITY

Due to lack of data the classification is not possible.

CARCINOGENICITY

OSHA ETHANOL is listed.
 No other component of this product, present at $\geq 0.1\%$, is listed.

NTP ETHANOL is listed.
 No other component of this product, present at $\geq 0.1\%$, is listed.

IARC ETHANOL is listed in group 1 (carcinogenic to humans).
 No other component of this product, present at $\geq 0.1\%$ has been evaluated.

California Proposition 65 This product contains the following chemical known to the State of California to cause cancer and birth defects or other reproductive harm: ETHANOL.
 No other component of this product, present at $\geq 0.1\%$ is known to the State of California to cause cancer, birth defects, or any other reproductive harm.

ADDITIONAL CARCINOGENICITY INFORMATION

Based on available data, the classification criteria are not met.

REPRODUCTIVE TOXICITY

BENZALKONIUM CHLORIDE:
 Benzalkonium Chloride Carcinogenicity studies in rats and guinea pigs, administered orally: Not carcinogenic
 Lifetime carcinogenicity studies in mice and rabbits, administered dermally: No skin tumors were induced

Based on available data, the classification criteria are not met.

BENZALKONIUM CHLORIDE:
 Reproduction and development study: Mouse: 100 mg/kg/day: Administered intravaginally during early gestation: No teratogenicity noted.
 Reproduction and development study: Rat: 50 - 200 mg/kg: Administered intravaginally: Embryotoxicity and fetotoxicity at high doses; no teratogenicity.

ETHANOL:
 Human (female): Oral - Effects on Newborn: Apgar score (human only); other neonatal measures or effects; drug dependence.

SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE

Due to lack of data the classification is not possible.

SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE

Based on available data, the classification criteria are not met.

ASPIRATION HAZARDS

Due to lack of data the classification is not possible.

SIGNS AND SYMPTOMS OF EXPOSURE
ROUTES OF EXPOSURE:

Oral, Dermal, Inhalation, Eye contact

EARLY ONSET SYMPTOMS RELATED TO EXPOSURE:

Not available

DELAYED HEALTH EFFECT FROM EXPOSURE:

Respiratory depression. Cyanosis. Metabolic acidosis. Hypotension

Symptoms related to the physical, chemical, and toxicological characteristics:

Burning pain and severe corrosive skin damage. Acute eye irritation/corrosion. Burning in mouth, throat, and/or stomach. Nausea. Vomiting. Diarrhea. Salivation. Mouth ulcers. Difficulty breathing. Bluish skin. Muscle weakness. Dizziness. Headache. Restlessness.

Medical conditions aggravated by exposure:

Asthma. Pre-existing skin conditions or damage.

POTENTIAL HEALTH EFFECTS

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion Harmful if swallowed. Causes digestive tract burns.

Skin Harmful if absorbed through skin. Corrosive to skin. Causes severe skin burns.

Eyes Corrosive to eyes. Causes severe eye burns. Causes serious eye damage.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY
BENZALKONIUM CHLORIDE:

EC50: 48 Hr: Crustacea(Daphnia): (mg/L): 0.0059

LC50: 96 Hr: Fish(Bluegill (Lepomis macrochirus)): (mg/L): 0.515

EC50: 72 or 96 Hr: Algae (or other aqua plants): (mg/L): Not available

PERSISTENCE AND DEGRADABILITY

Readily biodegradable.

BIOACCUMULATIVE POTENTIAL

Log Pow:-0.31.

MOBILITY IN SOIL

Soluble in water.

OTHER ADVERSE EFFECTS

Not available

This product is not intended to be released into the environment

SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSAL METHODS

Dispose of in accordance with federal / local laws and regulations. Avoid release into the environment.

SECTION 14: TRANSPORT INFORMATION

UN PROPER SHIPPING NAME

CORROSIVE LIQUID, FLAMMABLE, N.O.S.

UN NUMBER

2920

CLASS

8(3)

PACKING GROUP

II

AUSTRALIA
HAZCHEM

3W

EU

TRANSPORT IN BULK ACCORDING TO
ANNEX II OF MARPOL 73/78 AND THE
IBC CODE

Not Listed

ENVIRONMENTAL HAZARDS

Not available

SPECIAL SHIPPING INFORMATION

Not applicable

SECTION 15: REGULATORY INFORMATION

UNITED STATES REGULATIONS

Chemical Name & CAS	CERCLA 40 CFR Part 302.4	SARA (Title III) 40 CFR Part 372.65	EPA 40 CFR Part 355		Pennsylvania	Right-to-know		California Prop 65
			Appendix A	Appendix B		New Jersey	Massachusetts	
ETHANOL, 64-17-5	N/L	N/L	N/L	N/L	X	X	X	X
BENZALKONIUM CHLORIDE 8001-54-5	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L

N/L = Not Listed; X = Listed

AUSTRALIAN REGULATIONS

Chemical Name & CAS	Poisons and Therapeutic Goods	Therapeutic Goods Act	Code of Practices - Illicit Drug Precursors	Poisons Standard	Work Health and Safety Regulations	Inventory of Industrial Chemicals
ETHANOL, 64-17-5	N/L	N/L	Listed as Category III	N/L	N/L	N/L
BENZALKONIUM CHLORIDE 8001-54-5	N/L	Listed as Schedule 6	N/L	Listed	N/L	N/L

N/L = Not Listed

EU REGULATIONS

Chemical Name & CAS	REACH ANNEX XVII	REACH ANNEX XIV	EC 1005/2009	EC 850/2004	EC 1107/2009	PIC - Prior Informed Consent Regulation	EC 2012/18
ETHANOL, 64-17-5	N/L	N/L	N/L	N/L	N/L	N/L	N/L
BENZALKONIUM CHLORIDE 8001-54-5	N/L	N/L	N/L	N/L	N/L	N/L	N/L

N/L = Not Listed; X = Listed

Any EU regulation not listed above is not applicable to this product.

SUBJECT TO INTERNATIONAL
AGREEMENT

Not applicable

SECTION 16: OTHER INFORMATION

REFERENCES

Available upon request

ABBREVIATIONS AND ACRONYMS

ACGIH - American Conference of Governmental Industrial Hygienists; **AIHA WEEL** – American Industrial Hygiene Association Workplace Environment Exposure Levels; **CAESAR** – Computer Assisted Evaluation of industrial chemical Substances According to Regulations; **CAS** – Chemical Abstract Service; **CERCLA** – Comprehensive Environmental Response, Compensation, and Liability Act; **EC50** – Effective Concentration, 50%; **EPA** – Environmental Protection Agency; **GHS** – Global Harmonized System; **HMIS** – Hazardous Materials Information System; **HSE** – Health and Safety Executive; **HSIS** – Hazardous Substances Information System; **IARC** – International Agency for Research on Cancer; **IDLH** - Immediately Dangerous to Life or Health; **IRFMN** – Ready Biodegradability Model; **ISS** – Istituto Superiore Sanità; **LC50** – Lethal Concentration, 50%; **LD50** – Lethal Dose, 50%; **MSHA** - Mine Safety and Health Administration; **NIOSH** – National Institute for Occupational Safety and Health; **NTP** – National Toxicology Program; **OSHA PEL** – Occupational Safety & Health Administration Permissible Exposure Limits; **QSAR** – Quantitative Structure-activity relationship; **REL** - Recommended Exposure Limit; **SARA** – Superfund Amendments and Reauthorization Act; **STEL** – Short Term Exposure Limit; **TLV** – Threshold Limit Value; **TWA** – Time Weighted Average; **WHMIS** – Workplace Hazardous Materials Information System

LAST REVISION

09/2025

SUPERSEDES

03/2024

For a list of changes to the SDS since the last version, please communicate with MEDISCA at www.medisca.com

DISCLAIMER

This document was created in accordance with OSHA, Safe Work Australia and WHMIS regulations. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. MEDISCA® shall not be held liable for any damage resulting from handling or from contact with the above product. Recipients of the product must take responsibility for observing existing laws and regulations.

SUPPLEMENTARY INFORMATION

For all country specific requirements not outlined on this Safety Data Sheet, please request Supplementary Page to this Safety Data Sheet.