Material Safety Data Sheet

Catalog Number: 101386
Revision date: 26-Apr-2006

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY INFORMATION

Catalog Number: 101386

Product name: CHOLINE CHLORIDE

Synonyms: Choline Hydrochloride; Hepacholine; (2-Hydroxyethyl)Trimethyl-Ammonium Chloride
Supplier:
MP Biomedicals, LLC
29525 Fountain Parkway
Solon, OH 44139
tel: 440-337-1200

Emergency telephone number: CHEMTREC: 1-800-424-9300 (1-703-527-3887)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Weight %	ACGIH Exposure Limits:	OSHA Exposure Limits:
CHOLINE CHLORIDE	67-48-1	90 - 100%	None	None

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: May cause skin irritation and/or dermatitis

Principle routes of exposure: Skin
Inhalation: May cause irritation of respiratory tract
Ingestion: May be harmful if swallowed.
Skin contact: May cause allergic skin reaction
Eye contact: Avoid contact with eyes

Statements of hazard MAY CAUSE ALLERGIC SKIN REACTION.
Statement of Spill or Leak - ANSI Label Eliminate all ignition sources. Absorb and/or contain spill with inert materials (e.g., sand, vermiculite). Then place in appropriate container. For large spills, use water spray to disperse vapors, flush spill area. Prevent runoff from entering waterways or sewers.

4. FIRST AID MEASURES

General advice: In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
Inhalation: Move to fresh air. Call a physician immediately.
Skin contact: Rinse immediately with plenty of water and seek medical advice
Ingestion: Do not induce vomiting without medical advice.
Eye contact: In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Protection of first-aiders: No information available
Medical conditions aggravated by exposure: None known

5. FIRE FIGHTING MEASURES

Suitable extinguishing media: Use dry chemical, CO2, water spray or "alcohol" foam
Specific hazards: Burning produces irritant fumes.
Unusual hazards: None known
Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear
Specific methods: Water mist may be used to cool closed containers.
Flash point: Not determined
Autoignition temperature: Not determined
NFPA rating:

NFPA Health:	1
NFPA Flammability:	1
NFPA Reactivity:	0

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment.
Environmental precautions: Prevent product from entering drains.
Methods for cleaning up: Sweep up and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE

Storage:

ROOM TEMPERATURE
DESICCATE

Handling: Use only in area provided with appropriate exhaust ventilation.
Safe handling advice: Wear personal protective equipment.
Incompatible products: Oxidising and spontaneously flammable products

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures: Ensure adequate ventilation.
PERSONAL PROTECTIVE EQUIPMENT
Respiratory protection: Breathing apparatus only if aerosol or dust is formed.
Hand protection: Pvc or other plastic material gloves
Skin and body protection: Usual safety precautions while handling the product will provide adequate protection against this potential effect.
Eye protection: Safety glasses with side-shields
Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.



9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Powder
Formula: C5H14NO•Cl
Molecular weight: 139.6
Melting point/range: No data available at this time.
Boiling point/range: No Data available at this time.
Density: 1.1 g/cm3 at 20 °C
Vapor pressure: 10 hPa at 20 °C

Evaporation rate:	No data available
Vapor density:	No data available
Solubility (in water):	Soluble
Flash point:	Not determined
Autoignition temperature:	Not determined

10. STABILITY AND REACTIVITY

Stability:	Stable under recommended storage conditions.
Polymerization:	None under normal processing.
Hazardous decomposition products:	Chloride/Hydrochloric acid , Nitrogen oxides (NOx)/ammonia/CN-
Materials to avoid:	Strong oxidising agents
Conditions to avoid:	Exposure to air or moisture over prolonged periods.

11. TOXICOLOGICAL INFORMATION

Product Information

Acute toxicity

Components	**RTECS Number:**	**Selected LD50s and LC50s**
CHOLINE CHLORIDE	KH2975000	Oral LD50 Rat : 3400 mg/kg Oral LD50 Mouse : 3900 mg/kg

Chronic toxicity:	Chronic exposure may cause nausea and vomiting, higher exposure causes unconsciousness.
Local effects:	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
Specific effects:	May include moderate to severe erythema (redness) and moderate edema (raised skin), nausea, vomiting, headache.
Primary irritation:	No data is available on the product itself.
Carcinogenic effects:	No data is available on the product itself.
Mutagenic effects:	No data is available on the product itself.
Reproductive toxicity:	No data is available on the product itself.

12. ECOLOGICAL INFORMATION

Mobility:	No data available
Bioaccumulation:	No data available
Ecotoxicity effects:	No data available
Aquatic toxicity:	May cause long-term adverse effects in the aquatic environment.

Components	**U.S. DOT - Appendix B - Marine Pollutan**	**U.S. DOT - Appendix B - Severe Marine Pollutants**	**United Kingdom - The Red List:**
CHOLINE CHLORIDE	Not Listed	Not Listed	Not Listed

Components	**Germany VCI (WGK)**	**World Health Organization (WHO) - Drinking Water**	**Ecotoxicity - Fish Species Data**
CHOLINE CHLORIDE	1	Not Listed	Not Listed

Components	**Ecotoxicity - Freshwater Algae Data**	**Ecotoxicity - Microtox Data**	**Ecotoxicity - Water Flea Data**
CHOLINE CHLORIDE	Not Listed	Not Listed	Not Listed

Components	EPA - ATSDR Priority List	EPA - HPV Challenge Program Chemical List	California - Priority Toxic Pollutants
CHOLINE CHLORIDE	Not Listed	indicator 4; ICCA sponsored	Not Listed

Components	California - Priority Toxic Pollutants	California - Priority Toxic Pollutants
CHOLINE CHLORIDE	Not Listed	Not Listed

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products: Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority. Residue from fires extinguished with this material may be hazardous.

Contaminated packaging: Do not re-use empty containers

14. TRANSPORT INFORMATION

UN/Id No: Not regulated

DOT:

Proper shipping name: Not Regulated

Components	U.S. DOT - Appendix A Table 1 - Reportable Quantities
CHOLINE CHLORIDE	Not Listed

TDG (Canada):

WHMIS hazard class: Non-controlled

IMDG/IMO

IMDG - Hazard Classifications Not Applicable

Components	U.S. DOT - Appendix B - Marine Pollutan	U.S. DOT - Appendix B - Severe Marine Pollutants
CHOLINE CHLORIDE	Not Listed	Not Listed

IMO-labels:

15. REGULATORY INFORMATION

International Inventories

Components
CHOLINE CHLORIDE

Inventory - United States TSCA - Sect. 8(b)	Present
Canada DSL Inventory List -	Present
Australia (AICS):	Present
Inventory - China:	Present

EU EINECS List -	200-655-4; C5H14NO.Cl
Inventory - Japan:	2-341; 9-1994
Korean KECL:	KE-20909
Philippines PICCS:	Present

U.S. regulations:

Components	**California Proposition 65 -**	**Massachusetts Right to Know List:**	**New Jersey Right to Know List:**	**Pennsylvania Right to Know List:**
CHOLINE CHLORIDE	Not Listed	Not Listed	Not Listed	Not Listed

Components	**Florida substance List:**	**Rhode Island Right to Know List:**	**Illinois - Toxic Air Contaminants**	**Connecticut - Hazardous Air Pollutants**
CHOLINE CHLORIDE	Not Listed	Not Listed	Not Listed	Not Listed

Components	**SARA 313 Emission reporting/Toxic Release of Chemicals**	**CERCLA/SARA - Section 302 Extremely Haz**	**NTP:**	**IARC:**
CHOLINE CHLORIDE	Not Listed	Not Listed	None	None

SARA 313 Notification: The above is your notification as to the SARA 313 listing for this product(s) pursuant to Section 313 of Title III of the Superfund Ammendments and Reauthorization Act of 1986 and 40 CFR Part 372.

If you are unsure if you are subject to the reporting requirements of Section 313, or need more information, please call the EPA Emergency Planning and Community Right-To-Know Information Hotline: (800) 535-0202 or (202) 479-2499 (in Washington, DC or Alaska).

State Notification: The above information is your notice as to the Right-to-Know listings of the stated product(s). Individual states will list chemicals for a variety of reasons including, but not limited to, the compounds toxicity; carcinogenic, tumorigenic and/or reproductive hazards; and the compounds environmental impact if accidentally released.

16. OTHER INFORMATION

Prepared by: Health & Safety
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End of Safety Data Sheet