Material Safety Data Sheet

Catalog Number: 150109
Revision date: 26-Apr-2006

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY INFORMATION

Catalog Number: 150109

Product name: 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:
AMMONIUM CHLORIDE	12125-02-9	90 - 100%	10 mg/m³ TWA (fume)	None

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Harmful by inhalation, in contact with skin and if swallowed.

Category of Danger:
Harmful

Principle routes of exposure: Skin
Inhalation: Harmful by inhalation.
Ingestion: Harmful if swallowed.
Skin contact: Harmful in contact with skin.
Eye contact: Risk of serious damage to eyes

Statements of hazard HARMFUL IF SWALLOWED. MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR INHALED.
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.
Statement of First Aid If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Call a physician.
Precautions - ANSI Label Do not taste or swallow. Wash thoroughly after handling. Avoid breathing vapors. Avoid contact with skin, eyes and clothing

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. Never give anything by mouth to an unconscious person. Consult a physician Drink 1 or 2 glasses of water. Induce vomiting, but only if victim is fully conscious. Obtain medical attention.
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 media appropriate for the surrounding fire.
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:	> 400 °C

NFPA rating:

NFPA Health:	2
NFPA Flammability:	0
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

Handling:	Use only in area provided with appropriate exhaust ventilation.
Safe handling advice:	Wear personal protective equipment. Remove and wash contaminated clothing before reuse.
Technical measures/storage conditions:	Keep containers tightly closed in a cool, well-ventilated place. Keep container tightly closed in a dry and well-ventilated place.
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

Appearance and Odor	Odorless, colorless crystals or crystal masses; or white, granular powder; hyroscopic (absorbs moisture from the air).
Physical state:	Powder
Formula:	Cl-H4-N
Molecular weight:	53.50
Melting point/range:	335 °C with decomposition and sublimation
Boiling point/range:	520 °C (968 °F)
Density:	1.527 g/cm3 at 20 °C
Vapor pressure:	1.3 hPa at 30 °C
Evaporation rate:	0 (butyl acetate=1)
Vapor density:	1.9 (air = 1)
Solubility (in water):	Soluble
Flash point:	Not determined
Autoignition temperature:	> 400 °C

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:	-

Contact with boron trifluoride, boron pentafluoride, iodine heptafluoride, or potassium chlorate cause violent reactions. Incompatible with alkalies, acids, salts of lead or silver. At fire temperat

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**
AMMONIUM CHLORIDE	BP4550000	Oral LD50 Rat : 1650 mg/kg Oral LD50 Mouse : 1300 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.

Components	**NIOSH - Health Effects**	**NIOSH - Target Organs**
AMMONIUM CHLORIDE	Skin and respiratory irritation	respiratory system, skin, eyes

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:
AMMONIUM CHLORIDE	Not Listed	Not Listed	Not Listed

Components	Germany VCI (WGK)	World Health Organization (WHO) - Drinking Water	Ecotoxicity - Fish Species Data
AMMONIUM CHLORIDE	1	Not Listed	LC50 (24-96 hr) bluegill:725 mg/L. LC50 (24 hr) goldfish:640 mg/L.;LC50 (48 hr) carp:109.0 mg/L. Cond:Static.

Components	Ecotoxicity - Freshwater Algae Data	Ecotoxicity - Microtox Data	Ecotoxicity - Water Flea Data
AMMONIUM CHLORIDE	Not Listed	Not Listed	EC50 (24 hr) water flea:202 mg/L.:

Components	EPA - ATSDR Priority List	EPA - HPV Challenge Program Chemical List	California - Priority Toxic Pollutants
AMMONIUM CHLORIDE	Not Listed	Not Listed	Not Listed

Components	California - Priority Toxic Pollutants	California - Priority Toxic Pollutants
AMMONIUM 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: 3077

DOT:

Proper shipping name: Environmentally hazardous substance, solid, n.o.s.
IATA Hazard Label(s): Miscellaneous
Hazard Class 9 **-**
Other miscellaneous materials
Packing group: III

Emergency Response Guide Number (ERG): 171

Components	U.S. DOT - Appendix A Table 1 - Reportable Quantities
AMMONIUM CHLORIDE	RQ = 5000 pounds (2270 kg)

TDG (Canada):

WHMIS hazard class: D2b toxic materials

IMDG/IMO

Proper shipping name: Environmentally hazardous substance, solid, n.o.s.

IMDG - Hazard Classifications Not Applicable

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

IMO-labels:

15. REGULATORY INFORMATION

International Inventories

Components
AMMONIUM CHLORIDE

Inventory - United States TSCA - Sect. 8(b)	Present
Canada DSL Inventory List -	Present
Australia (AICS):	Present
Inventory - China:	Present
EU EINECS List -	235-186-4; ClH4N
Inventory - Japan:	1-218
Korean KECL:	KE-01645
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:
AMMONIUM CHLORIDE	Not Listed	[present]	sn 0093	environmental hazard

Components	Florida substance List:	Rhode Island Right to Know List:	Illinois - Toxic Air Contaminants	Connecticut - Hazardous Air Pollutants
AMMONIUM CHLORIDE	[present]	Toxic, Flammable	Not Listed	200 ug/m^3 HLV

Components	SARA 313 Emission reporting/Toxic Release of Chemicals	CERCLA/SARA - Section 302 Extremely Haz	NTP:	IARC:
AMMONIUM 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

Disclaimer: The information and recommendations contained herein are based upon tests believed to be reliable. However, MP Biomedicals does not guarantee the accuracy or completeness NOR SHALL ANY OF THIS INFORMATION CONSTITUTE A WARRANTY, WHETHER EXPRESSED OR IMPLIED, AS TO THE SAFETY OF THE GOODS, THE MERCHANTABILITY OF THE GOODS, OR THE FITNESS OF THE GOODS FOR A PARTICULAR PURPOSE. Adjustment to conform to actual conditions of usage maybe required. MP Biomedicals assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.

End of Safety Data Sheet