

ZACLON LLC

MATERIAL SAFETY DATA SHEET

IDENTIFICATION

NAME Ammonium Chloride, Technical

CHEMICAL FAMILY Inorganic Salt

GRADES C; R

I.D. NOS./CODES NIOSH Registry No: BP4550000

SYNONYMS Sal Ammoniac

FORMULA NH₄Cl

MANUFACTURER/DISTRIBUTOR Zaclon LLC
PRODUCT INFORMATION PHONE (800) 356-7327
ADDRESS 2981 Independence Road
 Cleveland, Ohio 44115

TRANSPORTATION EMERGENCY PHONE CHEMTREC (800) 424-9300

PHYSICAL DATA

| | |
|---|--|
| BOILING POINT, 760 MM Hg Sublimes 338 °C (640 °F) | MELTING POINT 220 °C (428 °F) |
| SPECIFIC GRAVITY 1.53 | VAPOR PRESSURE Nil |
| VAPOR DENSITY Not applicable. | SOLUBILITY IN WATER 28.2% at 25 °C (77 °F) |
| pH INFORMATION 2 to 4 in solution - 2 lb/gal | EVAPORATION RATE (BUTYL ACETATE=1) 0 |
| FORM Solid | APPEARANCE C-Granular; R-Rods; |
| COLOR White to off-white | ODOR Odorless |

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

HAZARDOUS COMPONENTS

| MATERIAL(S) | CAS NO. | APPROXIMATE % |
|-------------------|------------|---------------|
| Ammonium Chloride | 12125-02-9 | 99 |

HAZARDOUS REACTIVITY**INSTABILITY**

Stable at room temperature. Sublimes with heat; dissociates into hydrogen chloride and ammonia gases.

INCOMPATIBILITY

Incompatible with alkalis, strong oxidants, potassium chlorate.

DECOMPOSITION Will decompose with heat, releasing hydrogen chloride and ammonia gases which partially reform ammonium chloride as a dust cloud or smoke (see Fire and Explosion Hazards, below).

POLYMERIZATION Will not occur.

FIRE AND EXPLOSION DATA

FLASH POINT Will not burn. **FLAMMABLE LIMITS IN AIR % BY VOL.**

AUTOIGNITION TEMPERATURE UPPER Not applicable.
Not applicable.

AUTODECOMPOSITION TEMPERATURE Not available.

FIRE AND EXPLOSION HAZARDS If overheated, 260-315 °C (500-600°F), hydrogen chloride and ammonia gases may be released.

EXTINGUISHING MEDIA

As appropriate for combustibles in area. Water spray will reduce irritating fumes and gases.

SPECIAL FIRE FIGHTING INSTRUCTIONS None.

HEALTH HAZARD INFORMATION

PRINCIPAL HEALTH HAZARDS (Including Significant Routes, Effects, Symptoms of Over-Exposure, and Medical Conditions Aggravated by Exposure)

Oral LD50: 1650 mg/kg in rats

The compound is not a skin irritant and is not an eye irritant in animals. Toxic effects described in animals from short exposures by ingestion include effects on acid-base balance and water metabolism. Toxic effects in animals occurring only with inhalation exposures are lower respiratory irritation. Tests for mutagenic activity in bacterial or mammalian cell cultures have been inconclusive with positive results in some studies and negative results in others.

Human health effects of overexposure may initially include: no anticipated adverse effects. Higher ingestion exposures may lead to nonspecific discomfort, such as nausea or vomiting; or profound acidosis.

CARCINOGENICITY Not listed as a carcinogen by IARC, NTP, OSHA, or ACGIH.

EXPOSURE LIMITS [PEL (OSHA), TLV (ACGIH), ETC.]

Exposure limits for ammonium chloride have not been established by OSHA or ACGIH. The ACGIH 8-hour TLV®-TWA is 10 mg/m³ for ammonium chloride fumes and the ACGIH Short Term Exposure Limit (STEL) is 20 mg/m³ for ammonium chloride fumes.

SAFETY PRECAUTIONS

Avoid breathing fumes.
Wash thoroughly after handling.

FIRST AID

If large amounts are inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician.

If swallowed, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person. Call a physician.

In case of eye contact, immediately flush with plenty of water for at least 15 minutes. Call a physician.

The compound is not likely to be hazardous by skin contact, but cleansing the skin after use is advisable.

PROTECTION INFORMATION

GENERALLY APPLICABLE CONTROL MEASURES

Good general ventilation should be provided to keep concentrations below the exposure limit.

PERSONAL PROTECTIVE EQUIPMENT

Safety spectacles and, if exposure limits are exceeded, a filter respirator approved by NIOSH for dust and fumes.

DISPOSAL INFORMATION

AQUATIC TOXICITY The 48-hour LC50 in freshwater barb is 295-315 mg/L.

SPILL, LEAK OR RELEASE Scoop up and return container. Comply with Federal, State, and local regulations on reporting releases.

WASTE DISPOSAL Comply with Federal, State, and local regulations. If approved, flush to chemical sewer or transfer to a disposal contractor.

SHIPPING INFORMATION

DOT/IMO Not regulated as a hazardous material

HAZARD CLASS Not regulated

OTHER INFORMATION

REPORTABLE QUANTITY 5,000 pounds

SHIPPING CONTAINERS Bags or drums

STORAGE CONDITIONS
and strong oxidants.

Store in a clean, dry place away from strong alkalis

NPCA-HMIS RATINGS

| | |
|---------------------|---|
| Health | 1 |
| Flammability | 0 |
| Reactivity | 1 |
| Personal Protection | - |

Personal protection rating to be supplied by the user depending on use conditions.

ADDITIONAL INFORMATION AND REFERENCES

For further information, see Zaclon LLC "Ammonium Chloride, Technical" Data Sheet.

DATE OF LATEST REVISION/REVIEW: May 2008

PERSON RESPONSIBLE FOR MSDS: J.L. Curry,

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