Material Safety Data Sheet

Ammonium Chloride, P.A.

ACC# 00186

Section 1 - Chemical Product and Company Identification

MSDS Name: Ammonium Chloride, P.A.
Catalog Numbers: AC199970000, AC199970010, AC199975000
Synonyms: Ammonium Chloratum; Ammonium Chloridum; Ammonium Muriate; Sal Ammonia; Salmiac.
Company Identification:

Acros Organics N.V.
One Reagent Lane
Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01
For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
12125-02-9	Ammonium chloride	>99.0	235-186-4

Hazard Symbols: XN
Risk Phrases: 22 36

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: colorless or white solid. Caution! May cause respiratory and digestive tract irritation. May be harmful if swallowed. Causes eye irritation. May cause skin irritation.
Target Organs: None.

Potential Health Effects

Eye: Causes eye irritation.
Skin: May cause skin irritation.
Ingestion: May cause irritation of the digestive tract. May cause systemic toxicity with acidosis. May be harmful if swallowed.
Inhalation: If heated, dust or fume may cause respiratory tract irritation.
Chronic: Prolonged or repeated skin contact may cause dermatitis.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
Skin: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.
Ingestion: Call a poison control center. If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.
Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Substance is noncombustible. Containers may explode in the heat of a fire. May polymerize explosively when involved in a fire.
Extinguishing Media: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. Substance is noncombustible; use agent most appropriate to extinguish surrounding fire. For large fires, use water spray, fog or alcohol-resistant foam. Cool containers with flooding quantities of water until well after fire is out.
Flash Point: Not available.
Autoignition Temperature: Not available.
Explosion Limits, Lower:Not available.
Upper: Not available.
NFPA Rating: (estimated) Health: 1; Flammability: 0; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Avoid ingestion and inhalation.
Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Store below 40°C.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Ammonium chloride	10 mg/m3 TWA (fume); 20 mg/m3 STEL (fume)	10 mg/m3 TWA (fume)	none listed

OSHA Vacated PELs: Ammonium chloride: 10 mg/m3 TWA
Personal Protective Equipment
Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin: Wear impervious gloves.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Section 9 - Physical and Chemical Properties

Physical State: Solid
Appearance: colorless or white
Odor: odorless
pH: 5.0 (10% sol at 25C)
Vapor Pressure: 1 mm Hg @ 160.4C
Vapor Density: Not available.
Evaporation Rate:Negligible.
Viscosity: Not available.
Boiling Point: 520 deg C(sublimes)
Freezing/Melting Point:328 deg C
Decomposition Temperature:Not available.
Solubility: 39.6% at 176F.
Specific Gravity/Density:1.53 (Water=1)
Molecular Formula:NH4Cl
Molecular Weight:53.4877

Section 10 - Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions.
Conditions to Avoid: Incompatible materials, excess heat.
Incompatibilities with Other Materials: Boron trifluoride, iodine heptafluoride, potassium chlorates, acids, alkalies, silver salts, lead salts.

Hazardous Decomposition Products: Irritating and toxic fumes and gases, ammonia and hydrochloric acid fumes.
Hazardous Polymerization: May occur.

Section 11 - Toxicological Information

RTECS#:
CAS# 12125-02-9: BP4550000; BP4570000
LD50/LC50:
CAS# 12125-02-9:
Draize test, rabbit, eye: 500 mg/24H Mild;
Draize test, rabbit, eye: 100 mg Severe;
Oral, mouse: LD50 = 1300 mg/kg;
Oral, rat: LD50 = 1650 mg/kg;

Carcinogenicity:
CAS# 12125-02-9: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Epidemiology: No information available.
Teratogenicity: No information available.
Reproductive Effects: No information available.
Neurotoxicity: No information available.
Mutagenicity: Cytogenetic analysis: hamster fibroblast, 400 mg/L.
Other Studies: None.

Section 12 - Ecological Information

Ecotoxicity: Fish: LC50 = 109.0 mg/L; 48 Hr.; Static conditions Sunfish (fresh water) TLm=6 ppm/96H
Environmental: No information reported.
Physical: No information available.
Other: None.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	IATA	RID/ADR	IMO	Canada TDG

Shipping Name:	No information available.	No information available.
Hazard Class:		
UN Number:		
Packing Group:		

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 12125-02-9 is listed on the TSCA inventory.
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
SARA

CERCLA Hazardous Substances and corresponding RQs
CAS# 12125-02-9: 5000 lb final RQ; 2270 kg final RQ
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.
SARA Codes
CAS # 12125-02-9: acute, chronic.
Section 313
No chemicals are reportable under Section 313.
Clean Air Act:
This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors.
Clean Water Act:
CAS# 12125-02-9 is listed as a Hazardous Substance under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.
OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.
STATE
CAS# 12125-02-9 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.
California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols:
XN
Risk Phrases:

R 22 Harmful if swallowed.
R 36 Irritating to eyes.

Safety Phrases:
S 22 Do not breathe dust.

WGK (Water Danger/Protection)
CAS# 12125-02-9: 1
Canada - DSL/NDSL
CAS# 12125-02-9 is listed on Canada's DSL List.
Canada - WHMIS
This product has a WHMIS classification of D2B.
Canadian Ingredient Disclosure List
CAS# 12125-02-9 is listed on the Canadian Ingredient Disclosure List.
Exposure Limits
CAS# 12125-02-9: OEL-ARAB Republic of Egypt:TWA 10 mg/m3 (fume) OEL -AUSTRALIA:TWA 10 mg/m3;STEL 20 mg/m3 (fume) OEL-BELGIUM:TWA 10 mg/m3 ;STEL 20 mg/m3 (fume) OEL-DENMARK:TWA 10 mg/m3 (fume) OEL-FRANCE:TWA 10 mg/m3 (fume) OEL-THE NETHERLANDS:TWA 10 mg/m3 (fume) OEL-RUSSIA: STEL 10 mg/m3 (fume) OEL-SWITZERLAND:TWA 6 mg/m3 (fume) OEL-UNITED K INGDOM:TWA 10 mg/m3;STEL 20 mg/m3 (fume) OEL IN BULGARIA, COLOMBIA, J ORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM c heck ACGI TLV

Section 16 - Additional Information

MSDS Creation Date: 6/15/1999
Revision #3 Date: 12/03/2002