SAFETY DATA SHEET

Ammonium Chloride Treated

SECTION 1: IDENTIFICATION

Product identifier used on a label:	**Ammonium Chloride Treated**
Product code:	2040
HS Code:	282710
Recommended use of the chemical and restrictions on use:	Metal finishing. Textile industry. Industrial use.
Chemical family:	Inorganic salt
Chemical formula:	NH_4Cl
Name, address and phone # of supplier:	Aqua Bond Inc. PO box 63635. Toronto, ON, M1V 5K2 (416) 754-7211
24 Hr. Emergency phone #:	**CANUTEC (613) 996-6666**

SECTION 2: HAZARDS IDENTIFICATION

Classification of the chemical: This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Hazard classification:
ACUTE TOXICITY, ORAL, CATEGORY 4
EYE IRRITATION, CATEGORY 2A
SHORT-TERM (ACUTE) AQUATIC HAZARD, CATEGORY 3

Label elements:



Signal word: WARNING

Hazard statements:
H302: Harmful if swallowed
H319 Causes serious eye irritation.
H402 Harmful to aquatic life.

Precautionary statements:

Prevention
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear eye protection/ face protection.

Response
P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330 Rinse mouth.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/ attention.

Disposal
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards: Not available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/ mixture: Mixture

Ingredient name	CAS Number	GHS Classification	Concentration (wt. %)
Ammonium Chloride (Synonym: Salmiac)	12125-02-9	Acute toxicity, oral, category 4 Eye irritation, category 2A Short-term (acute) aquatic hazard, category 3	≥ 99.0 %
Anticaking agents May contain:			≤ 1.0 %
Hydrogenated tallow alkyl amine acetate	61790-59-8	Skin Irritation Category 2 Eye Damage Category 1	
Octadecanamine acetate	2190-04-7	Not hazardous	
Tricalcium phosphate	7758-87-4	Not hazardous	
Pectin	9000-69-5	Not hazardous	
Sodium alginate	9005-38-3	Not hazardous	
Sodium polyacrylate	9003-04-7	Not hazardous	

SECTION 4: FIRST-AID MEASURES

Description of first aid measures:

Ingestion: DO NOT induce vomiting, rinse mouth. Administer water if patient is conscious. Get medical attention if a large amount is swallowed. Get medical attention if you feel unwell.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if irritation develops or persists.

Skin contact: In case of contact, wash off with soap and plenty of water. Get medical attention.

Eye contact: Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Get medical attention if pain and irritation develops or persists.

Most important symptoms and effects, both acute and delayed:
Causes eye irritation. May cause mild skin and respiratory irritation. Harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting, thirst, headaches, hyperventilation and drowsiness.
Indication of any immediate medical attention and special treatment needed: No data available.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing media:	Use media appropriate for the surrounding fire.
Suitable	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable	None known.
Flash point:	Not Available.
Autoignition Temperature:	Not Available.
Special hazards arising from the substance:	When heated to decomposition, nitrogen oxide, hydrogen chloride gas and ammonia gas will be produced.
Hazardous thermal decomposition products:	Nitrogen oxide, hydrogen chloride gas, ammonia gas
Specific hazards:	This material is not combustible but will decompose under fire conditions.
Special protective actions for fire-fighters:	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk.
Special protective equipment for fire-fighters:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	Wear appropriate protective equipment. Wear chemical goggles, body-covering protective clothing, chemical resistant gloves, and rubber boots. Avoid creating and breathing dust. Avoid contact with eyes, skin and clothing. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not touch or walk through spilled material. Evacuate area. Do not breathe vapor or mist. Keep combustibles (wood, paper, oil, clothing, etc.) away from spilled material. Avoid dust formation. Remove all sources of ignition. Do not get water inside containers. Do not expose spill to water.
Environmental precautions:	Should not be released into environment. Prevent from reaching drains, sewer, or waterway. Report releases as required by local and national authorities.
Methods and materials for containment and cleaning up:	Wear protective eyeware, gloves, and clothing. Refer to Section 8. Sweep spilled material and place in a suitable container for disposal. Always obey local regulations. Containerize for disposal. Refer to Section 13. If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Keep in suitable closed containers for disposal.
Special spill response procedures:	In case of transportation accident, contact CANUTEC (613) 996-6666.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling:	Put on appropriate personal protective equipment. Avoid exposure – obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Do not breathe vapor or mist. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use.
Conditions for safe storage:	Hygroscopic. Storage class (TRGS 510): 13: Non Combustible Solids Keep container tightly closed in a dry and well-ventilated place. Store in accordance with local regulations. Store in a segregated and approved area. Store protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials, food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be resealed and kept upright. Do not store in unlabeled containers.
Incompatible materials:	Oxidizing agents.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits

Ingredient	**Exposure limits**
Ammonium Chloride	10mg/m^3 TWA, ACGIH TLV (as fume), Canada. Alberta, Occupational Health and Safety Code (table 2: OEL) 20 mg/m^3 STEL, Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
Anticaking agent	No data available.

Engineering controls:	Ensure adequate ventilation, especially in confined areas.
Individual protection measures:	Eyes/face: Chemical splash goggles and face shield. Skin: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory: Wear appropriate respirator where spray mist occurs. Use a NIOSH approved dust and mist respirator or equivalent.
Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White crystalline powder
Odor:	odorless
Odor threshold:	Not available.
pH:	5.0 (10% aqueous solution at 25°C)
Melting point:	328 °C
Specific Gravity:	1.53 (Water=1)
Solubility in water:	39.6% at 176F
Freezing point:	Not available
Initial boiling point and boiling range:	520 °C
Flash point:	Not available.
Evaporation rate:	Not applicable.
Flammability:	The product is not flammable.
Upper and lower flammability limits:	Not available.
Vapour pressure:	1 mm Hg at 160.4 °C
Vapour density:	Not applicable.
Partition coefficient n-octanol/water:	Not applicable.
Auto-ignition temperature:	Not available.
Decomposition temperature:	Not available.
Viscosity:	Not applicable.

SECTION 10: STABILITY AND REACTIVITY

Reactivity:	Stable at ambient temperature and under normal conditions of use
Chemical stability:	Stable at standard temperature and pressure.
Possibility of hazardous reactions:	Hazardous polymerization will not occur.
Conditions to avoid:	Exposure to moisture.
Incompatible materials:	Strong acids, Strong bases, Strong oxidizing agents.
Hazardous decomposition products:	Hazardous decomposition products formed under fire conditions: Carbon oxides, Nitrogen oxides (NOx), Hydrogen chloride gas, ammonia gas.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicity data:	Ammonium Chloride
Acute toxicity:	LD50 Oral - Rat - male and female - 1,410 mg/kg (OECD Test Guideline 401) LD50 Dermal - Rat - male and female - > 2,000 mg/kg (ECHA) **Skin corrosion/irritation** Skin – Rabbit, Result: No skin irritation - 24 h (Draize Test) **Serious eye damage/eye irritation** Eyes – Rabbit, Result: Eye irritation (ECHA) **Respiratory or skin sensitisation** Maximisation Test - Guinea pig, Result: negative (OECD Test Guideline 406) Acute oral toxicity - Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract. Acute inhalation toxicity - Possible damages:, mucosal irritations
Information on the likely routes of exposure:	Skin, Eyes, Inhalation, Ingestion
Potential health effects (acute):	Irritation to eyes, skin and respiratory tract. Overexposure may be irritating to the respiratory system.
Delayed and immediate effects, chronic effects from short and long term exposure:	None known.
Potential chronic health effects:	None known.
Carcinogenicity:	IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
Mutagenicity:	Germ cell mutagenicity: Ames test, Escherichia coli/Salmonella typhimurium, Result: negative Mutagenicity (mammal cell test): chromosome aberration. Chinese hamster lung cells, Result: positive, OECD Test Guideline 474
Teratogenicity:	No data available.
Developmental effects:	No data available.
Fertility effects:	No data available.
Sensitization:	No data available.
Toxicological effects:	No data available.
Irritation/corrosion:	Causes eye irritation.
Aspiration hazard:	No data available.
Additional Information:	RTECS: BP4550000

Specific target organ toxicity single exposure:	No data available.
Specific target organ toxicity repeated exposure:	No data available.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity	Toxicity to fish semi-static test LC50 - Cyprinus carpio (Carp) - 209.00 mg/l - 96 h (ECHA) Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - 101 mg/l - 48 h (ECHA) Toxicity to algae static test ErC50 - Chlorella vulgaris (Fresh water algae) - 1,300 mg/l- 5 d (ECHA) Toxicity to bacteria static test EC50 - activated sludge - 1,310 mg/l - 0.5 h (OECD Test Guideline 209)
Persistence and degradability:	Not available.
Bioaccumulative potential:	Not available.
Mobility in soil:	No mobility in soil is expected. Ammonium chloride is highly soluble and dissociates into ammonia and chloride ions.
Results of PBT and vPvB assessment:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal methods:	The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor. This material and its container must be disposed of in a safe way. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. **Contaminated packaging:** Dispose of as unused product. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues.

SECTION 14: TRANSPORT INFORMATION

UN Number:	-
UN proper shipping name:	-
Transport hazard class:	-
Packing group:	-
Environmental hazard:	No data available.
Special precautions for user:	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident.

SECTION 15: REGULATORY INFORMATION

United States

Toxic Substances Control Act (TSCA)	Ammonium Chloride is listed.
Superfund Amendments and Reauthorization Acts	Ammonium Chloride – Section 311/312 Hazard Classes: Acute health hazard

Canada

Canadian Domestic Substances List (DSL):	Ammonium Chloride is listed.

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains the information required by the HPR.

SECTION 16: OTHER INFORMATION

Revision date: October 16, 2023

UN = United Nations

Disclaimer

While the information and recommendations set forth are believed to be accurate as of data hereof, Aqua Bond Inc., makes no warranty with respect thereto and disclaims all liability from reliance thereon.