SAFETY DATA SHEET
99.5%
AMMONIUM CHLORIDE

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. PRODUCT IDENTIFIER

Product name:	Ammonium Chloride
Product No.:	AMCH
CAS-No.:	12125-02-9
EC No.:	235-186-4
REACH:	01-2119487950-27
Synonym:	Ammonium Chloratum, Ammonium Chloridum, Ammonium Muriate, Sal Ammoniac
Chemical Formula:	NH_4Cl

1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Recommended use: Source of nitrogen in fertilisers;

Nutritive media for yeast microbiological organisms;

In fireworks;

In the textile and leather industry;

As a flux in preparing metals to be tin coated, galvanised and soldered;

For cleaning tip of soldering Irons;

An electrolyte in zinc-carbon batteries;

In hair shampoos and cleaning products;

In cooling baths to produce low temperatur es;

As a buffer solution when used in conjunction with ammonia.

1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

HD Chemicals LTD
UNIT 9 Scott Business Park
PL2 2PB Plymouth UK

Contact Person responsible for SDS: Mr Peter Konefal, e-mail: contact@hdchemicals.co.uk

SECTION 2: HAZARDS IDENTIFICATION

2.1. CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Classification – EC 1272/2008: Acute toxicity, Oral; Category 4 (H302)

2.2. LABEL ELEMENTS

SIGNAL WORDS
Warning

HAZARD PHRASES

H302	Harmful if swallowed

PROTECTION PHRASES

P264	Wash exposed skin thoroughly after handling
P270	Do not eat, drink or smoke when using this product
P301+P312	IF SWALLOWED: Call a poison center or doctor/physician if you feel unwell.
P330	Rinse mouth
P501	Dispose of contents/container to comply with local, state and federal regulations

SAFETY PHRASES

S22	Do not breathe dust

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

EC 1272/2008

Composition information – main constituents						
Substance name	**Mol. Formula**	**REACH**	**Typical conc. (%w/w)**	**EINECS No.**	**CAS-No.**	**Classification**
Ammonium Chloride	NH_4Cl	01-2119487950-27	99.5%	235-186-4	12125-02-9	H302

SECTION 4: FIRST AID MEASURES

4.1. DESCRIPTION OF FIRST AID MEASURES

First-aid measures general: Remove contaminated clothing. If you feel unwell, seek medical advice.

Inhalation: Remove to fresh air. If breathing is difficult, give oxygen. Seek medical attention if symptoms are severe.

Ingestion: DO NOT INDUCE VOMITING. Rinse mouth immediately and then drink plenty of water. Seek medical attention.

Skin contact: Wash thoroughly with soap and water.

Eye contact: Immediately wash eyes for at least 15 minutes under running water with eyelids held open. Consult an eye specialist.

4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Inhalation: Cough, pain, choking, and breathing difficulties

Ingestion: Nausea, vomiting

Skin contact: May cause irritation and dermatitis to skin

Eye contact: May cause irritation to eyes

4.3. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. EXTINGUISHING MEDIA

Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media: No information available.

5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Thermal decomposition can lead to release of irritating gases and vapours. Keep product and empty container away from heat and sources of ignition.

At temperatures of >338^{o}C can be emitted: ammonia, hydrogen chloride. The substances/groups of substances mentioned can be released if the product is involved in a fire.

5.3. ADVICE FOR FIRE-FIGHTERS

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation. Do not breathe vapour.

6.2. ENVIRONMENTAL PRECAUTIONS

Prevent further leakage or spillage. Do not let product enter drains.

6.3. METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Avoid raising dust. Sweep up or vacuum up spillage. Transfer to suitable, labelled containers for disposal.

SECTION 7: HANDLING AND STORAGE

7.1. PRECAUTIONS FOR SAFE HANDLING

Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with eyes, on skin. Avoid dust formation and aerosols. Do not mix with other chemicals. When using do not eat, drink or

smoke. Keep away from food, drink and animal feeding stuffs. Wash hands before breaks and at the end of the work day. Take off all contaminated clothing immediately. Store in a cool dry place.

For precautions see section 2.2.

7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Segregate from alkalis, alkalising substances, nitrates and oxidants. Do not store with Sodium Nitrate. Keep container tightly closed in a cool, dry and well-ventilated area. Keep in properly labeled containers.

7.3. SPECIFIC END USE(S)

See section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. CONTROL PARAMETERS/EXPOSURE GUIDELINES

Occupational Exposure Limit Values (Ammonium Chloride):

CAS NO	Exposure limit	Value	Name of Agent
12125-02-9	TWA – 8 Hrs	10 mg/m^3	Ammonium chloride
12125-02-9	STEL – 15 Min	20 mg/m^3	Ammonium chloride

Engineering controls: Good general ventilation should be used. Ventilation should effectively remove and prevent build up of any aerosols or mists generated from the handling of the product. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.


EYE PROTECTION


RESPIRATOR


FACE SHIELD


PROTECTION WEAR


HAND PROTECTION


WASH YOUR HAND

Protective equipment: Use protective gloves, goggles and long sleeved clothing.

Respiratory equipment: Use a EN149 (EU Standard) approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). P2 (filters at least 94 % of airborne particles, colour code: White).

Skin and body protection: Wear appropriate protective gloves and clothing to prevent skin exposure. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact.

Eye/Face protection: Tightly fitting safety goggles (splash goggles) (EN 166) or face shield afforded complete eye protection.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Powder
Colour:	White, crystalline
Odour:	Almost odourless
Initial boiling point (°C):	No data available
Melting point (°C):	338°C decomposes
Freezing point:	No data available
Relative density:	1.5274 g/cm^3
Specific gravity / density:	Not available
Vapour density:	Not available
Vapour pressure:	Not available
Flash point (°C):	Not available
Molecular mass:	53.491 g/mol
Auto-ignition temperature:	Not applicable
Oxidizing properties:	Not available

Decomposition temperature: Not available

Molecular formula: NH_4Cl

SECTION 10: STABILITY AND REACTIVITY

10.1. REACTIVITY

This product is not reactive under normal ambient conditions.

10.2. CHEMICAL STABILITY

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3. POSSIBILITY OF HAZARDOUS REACTIONS

Violent reaction under influence of oxidising agents. Incompatible with bases. Reacts with nitrites.

10.4. CONDITIONS TO AVOID

Keep away from heat. Decomposition takes place from temperatures above: 338 °C.

10.5. INCOMPATIBLE MATERIALS

No data available.

10.6. HAZARDOUS DECOMPOSITION

Thermal decomposition can lead to release of irritating gases and vapours. Keep product and empty container away from heat and sources of ignition.

At temperatures of >338^{o}C can be emitted: ammonia, hydrogen chloride. The substances/groups of substances mentioned can be released if the product is involved in a fire.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. INFORMATION ON TOXICOLOGICAL EFFECTS

TOXIC DOSE **LD50 Oral – Rat – 1650 mg/kg**

LD50 Dermal – Rat – > 2000 mg/kg

Inhalation: Cough, pain, choking, and breathing difficulties

Ingestion: Nausea, vomiting

Skin contact: May cause irritation and dermatitis to skin

Eye contact: May cause irritation to eyes

SECTION 12: ECOLOGICAL INFORMATION

12.1. TOXICITY

Aquatic Toxicity:

Toxicity to fish: LC50: 209 mg/l, 96h Cyprinus carpio

Toxicity to aquatic: EC50: > 100 mg/l, 48h Daphnia magna

12.2. PERSISTENCE AND DEGRADABILITY

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3. BIOACCUMULATIVE POTENTIAL

Does not significantly accumulate in organisms.

n-octanol/water (log KOW) -4,37

12.4. MOBILITY

The product is water soluble, and may spread in water systems . Will likely be mobile in the environment due to its water solubility. Highly mobile in soils.

12.5. RESULTS OF PBT AND VPVB ASSESSMENT

No data available.

12.6. OTHER ADVERSE EFFECTS

No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste disposal recommendations: This material and its container must be disposed of as hazardous waste. Dispose of this container to hazardous or special waste collection point. Dispose of contents/container in accordance with local/regional/national/international regulations.

Uncleaned packaging: Disposal must be made according to official regulations.

SECTION 14: TRANSPORT INFORMATION

IMDG

UN number	N/A
UN proper shipping name	N/A
Transport hazard class(es)	N/A
Packing group	N/A

ADR/RID

UN number	N/A
UN proper shipping name	N/A
Transport hazard class(es)	N/A
Packing group	N/A

IATA

UN number	N/A
UN proper shipping name	N/A
Transport hazard class(es)	N/A
Packing group	N/A

Specific national features of transport regulations must be observed. They are to be found in the shipping documents.

SECTION 15: REGULATORY INFORMATION

15.1. SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

Classification, Labeling & Packaging of Substances & Mixtures Regulations (1272/2008/CE).

National Regulations: WGK Classification Hazardous to water/Class 1.

Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment.

15.2 CHEMICAL SAFETY ASSESSMENT

Chemical safety Assessment has been carried out for this substance.

SECTION 16: OTHER INFORMATION

General information

The information contained in this safety data sheet is provided in accordance with the requirements of the regulations. The product should not be used for purposes other than those shown in section 1 without first referring to the supplier and obtaining written handling instruction. As the specific conditions of use of the product are outside the suppliers control, the user is responsible for ensuring that the requirements of relevant legislation are complied with.

Revision Comments

This information is provided in a revised format to that previously produced.

Revision Date: 01/10/2018

Revision: 01

Safety Data Sheet Status Approved.

Date printed 01/10/2018

Signature Initials P.K.

DISCLAIMER:

If this product is re-distributed and re-formulated for sale, details of its hazards and recommended methods for safe handling must be passed to customers. Customers are urged to ensure that the product is entirely suitable for their own purpose. It is the customer's responsibility to ensure that a suitable and sufficient assessment of the risks created by a work activity using this product is undertaken before this product is used.

NOTE:

The information contained in this Safety Data Sheet does not constitute the users own assessment of workplace risk as required by other Health & Safety Legislation (e.g. the Health and Safety at Work Act,1974;the control of Substances Hazardous to Health Regulations,1988). The data given here is based on current knowledge and experience. The purpose of this data sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the product's properties.