

## Safety Data Sheet

### SECTION 1: IDENTIFICATION

#### 1.1 Product Identifier

**Product Name:** Ammonium Chloride Treated and Untreated

#### 1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

**Product Use:** Food, Feed, Pharma, Metalurgy

**Uses Advised Against:** None identified

#### 1.3 Details of the Supplier of the Safety Data Sheet

**Manufacturer:** The Dallas Group of America, Inc.

374 Route 22

P.O. Box 489

Whitehouse, NJ 08888

**Information Phone:** Product Safety Department: 908-534-7800

**Fax:** 908-534-0084

#### 1.4 Emergency Telephone Number

**Emergency Information:** 908-534-7800 (office hours only)

**SDS Date of Preparation:** October 16, 2014

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1 Classification of the Substance or Mixture

**GHS / EU CLP Classification (No 1272/2008):**

Acute Toxicity Category 4 H302

Eye Irritation Category 2 H319

**EU Classification (67/548/EEC):** Harmful (Xn) R22, R36

#### 2.2 Label Elements



#### WARNING!

Harmful if swallowed.

Causes serious eye irritation.

#### Prevention

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Wear eye protection.

**Response**

**IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical attention.

**IF SWALLOWED:** Call a POISON CENTER or doctor if you feel unwell.

Rinse mouth.

**Disposal**

Dispose in accordance with national and local regulations.

**2.3 Other Hazards:**

None

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS#	EINECS#	EU Classification (67/548/EEC) GHS/CLP Classification	%
Ammonium Chloride	12125-02-9	235-186-4	Xn, Xi, R22, R36 Acute Toxicity Category 4 H302 Eye Irritation Category 2 H319	99
Anti-Caking Agents May contain the following: Hydrogenated tallow alkyl amine acetate	61790-59-8	263-149-2	Xi R36/38 Skin Irritation Category 2 H315 Eye Damage Category 1 H318	0-<1
Octadecanamine acetate	2190-04-7	218-583-7	Not hazardous	
Tricalcium phosphate	7758-87-4	231-840-8	Not hazardous	
Pectin	9000-69-5	232-553-0	Not hazardous	
Sodium alginate	9005-38-3	Not available	Not hazardous	

See Section 16 for further information on GHS Classification if applicable.

**SECTION 4: FIRST AID MEASURES**

**4.1 Description of First Aid Measures**

**Eye:** Flush with plenty of water for several minutes, holding eyelids open to assure thorough flushing. If contact lenses are present, remove them after the first 5 minutes if easy to do and continue flushing. Obtain medical attention if irritation persists.

**Skin:** Wash with soap and water. Remove any contaminated clothing and wash it before reuse. Get medical attention if irritation develops.

**Inhalation:** If irritation develops, remove person to fresh air. Get medical attention if irritation persists.

**Ingestion:** Do not induce vomiting unless directed to do so by medical personnel. If person is alert, have them rinse their mouth with water. Get medical attention.

**4.2 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.

**4.3 Indication of any immediate medical attention and special treatment needed:** No immediate medical attention required.

## SECTION 5: FIRE FIGHTING MEASURES

- 5.1 Extinguishing Media:**  
Use media appropriate for the surrounding fire.
- 5.2 Special Hazards Arising from the Substance or Mixture**  
**Unusual Fire and Explosion Hazards:** This material is not combustible but will decompose under fire conditions.  
**Hazardous Combustion Products:** When heated to decomposition, nitrogen oxide, hydrogen chloride gas and ammonia gas will be produced.
- 5.3 Special Protective Actions for Fire-Fighters:**  
Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

- 6.1 Personal Precautions, Protective Equipment and Emergency Procedures:**  
Wear appropriate protective equipment. Evacuate area. Avoid creating and breathing dust. Avoid contact with eyes, skin and clothing.
- 6.2 Environmental Precautions:**  
Avoid release to the environment. Report releases as required by local and national authorities.
- 6.3 Methods and Material for Containment and Cleaning Up:**  
Sweep spilled material and place in a suitable container for disposal or reuse. Clean up residual material by washing with water.
- 6.4 Reference to Other Sections:**  
Refer to Section 8 for protective equipment. Refer to Section 13 for disposal guidance.

## SECTION 7: HANDLING AND STORAGE

- 7.1 Precautions for Safe Handling:**  
Avoid contact with the eyes. Avoid prolonged contact with skin and clothing. Avoid creating and breathing dust. Do not swallow. Use with adequate ventilation. Wash thoroughly with soap and water after handling. Remove contaminated clothing and launder before reuse. Do not smoke while handling.  
  
Do not reuse containers. Empty containers retain product residues can be hazardous. Follow all SDS precautions when handling empty containers.
- 7.2 Conditions for Safe Storage, Including any Incompatibilities**  
Store in tightly closed containers. Store away oxidizing agents and other incompatible materials.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1 Control Parameters:**

Chemical Name	Exposure Limits
Ammonium Chloride	10mg/m <sup>3</sup> TWA ACGIH TLV (as fume)
Anticaking agent	None Established

Refer to local regulations for specific requirements.

**DNEL:** None established  
**PNEC:** None Established

## 8.2 Exposure Controls:

**Engineering Controls:** Use with adequate general or local ventilation to maintain exposure levels below the exposure limits.

**Eye and Face:** Chemical safety goggles recommended to avoid eye contact.

**Skin:** Impervious gloves such as nitrile or polyvinylchloride (PVC).

**Respiratory:** If the exposure levels are excessive, a local authority approved respirator should be worn. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134 and ANSI Z88.2 or other applicable regulations and standards and good Industrial Hygiene practice.

**Protective Clothing:** Wear protective clothing if needed to avoid skin contact and contamination of personal clothing.

**Work Hygienic Practices:** No special requirements.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic Physical and Chemical Properties:

<b>Physical State:</b> Solid	<b>Appearance:</b> White, crystalline solid
<b>Odor:</b> Odorless	<b>Odor Threshold:</b> Not applicable
<b>pH:</b> 4.3-5.5 (5% aqueous solution)	<b>Relative Density:</b> 900 g/L
<b>Boiling Point:</b> Not applicable	<b>Melting Point:</b> 642° F (399° C)
<b>Vapor Pressure:</b> Not applicable	<b>Water Solubility:</b> 37g / 100g saturated solution @ 20°C
<b>Vapor Density:</b> Not applicable	<b>Evaporation Rate:</b> Not applicable
<b>Viscosity:</b> Not applicable	<b>Pour Point:</b> Not applicable
<b>Flash Point:</b> None	<b>Flammable Limits: LEL:</b> None
<b>Autoignition Temperature:</b> None	<b>Flammable Limits: UEL:</b> None
<b>Percent Volatile:</b> 0%	<b>Flammability (solid/gas):</b> None
<b>Partition Coefficient: n-octanol/water:</b> Not applicable	<b>Decomposition Temperature:</b> 968°F (520°C)
<b>Explosive Properties:</b> None	<b>Oxidizing Properties:</b> None

### 9.2 Other Information: None

## SECTION 10: STABILITY AND REACTIVITY

### 10.1 Reactivity:

Reacts to produce ammonia and hydrogen chloride.

### 10.2 Chemical Stability:

Stable under normal conditions.

### 10.3 Possibility of Hazardous Reactions:

Reacts with alkalis to release ammonia. Reacts with acids to release hydrogen chloride.

### 10.3 Conditions to Avoid:

Heating to decomposition may produce nitrogen oxides, hydrogen chloride and ammonia gas.

### 10.5 Incompatible Materials:

Avoid strong oxidizing agents, alkalis, acids and nitrates. Corrodes most metals at high

temperatures.

## 10.6 Hazardous Decomposition Products:

Thermal decomposition may generate nitrogen oxides, hydrogen chloride and ammonia gas.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on Toxicological Effects:

**Eye:** Causes irritation with redness, tearing and pain.

**Skin:** May cause mild skin irritation.

**Skin Absorption:** No evidence of adverse effects from available information.

**Ingestion:** May cause gastrointestinal irritation, nausea, vomiting, thirst, headaches, hyperventilation and drowsiness. Large amounts may cause severe metabolic acidosis with symptoms such as headache, drowsiness, vomiting, confusion, thirst and hyperventilation.

**Inhalation:** May cause irritation of the nose, throat and upper respiratory tract with sneezing, coughing and sore throat.

**Chronic Toxicity:** None known.

#### Acute Toxicity Data:

Acute Toxicity Estimate: Oral 1410-1566 mg/kg, Dermal >2000

Ammonium Chloride: Oral rat LD50 1410 mg/kg, Dermal rabbit LD50 >2000 mg/kg

**Skin corrosion/irritation:** Ammonium chloride is not irritating to rabbit skin.

**Eye damage/ irritation:** Ammonium chloride is irritating to rabbit eyes (fully reversible with 7 days).

**Skin Sensitization:** Ammonium chloride did not cause sensitization in a guinea pig maximization test.

**Respiratory Sensitization:** No data available. Not expected to be a respiratory sensitizer based on human experience.

**Germ Cell Mutagenicity:** Ammonium chloride was negative in an in vitro mammalian cell gene mutation assay and positive in an in vitro mammalian chromosome aberration test without metabolic activation. Ammonium chloride was negative in an in vivo chromosome aberration micronucleus assay.

**Carcinogenicity:** None of the components is listed as a carcinogen or suspected carcinogen by ACGIH, IARC, NTP or OSHA. Studies in rats and mice with ammonium chloride were conducted for carcinogenicity or the potential of carcinogenicity by acidification of the urinary tract. The decrease of urine pH was observed, however the incidences of bladder tumor, hyperplasia and calculi were not increased. These studies showed negative results on carcinogenicity in rats and mice.

**Developmental / Reproductive Toxicity:** Rats were administered 1 mL/kg of a solution of ammonium chloride at 8.9 mg/kg by gavage on days 7 to 10 of gestation. Neither maternal toxicity nor developmental toxicity including teratogenicity was found.

**Specific Target Organ Toxicity (Single Exposure):** No data available.

**Specific Target Organ Toxicity (Repeated Exposure):** In an oral repeat dose study, rats were administered ammonium chloride in their feed at 684 mg/kg for 70 days. No treatment related effects were seen. The NOAEL for oral repeated dose toxicity is considered to be 684 mg/kg.

## SECTION 12: ECOLOGICAL INFORMATION

- 12.1 Toxicity:**  
 Ammonium Chloride: 96 hr LC50 prosopium williamsoni 46.27 mg/L, 48 hr EC50 daphnia magna 136.6 mg/L, 5 d EC50 chlorella vulgaris 1300 mg/L (calculated)
- Persistence and Degradability:**
- 12.1 Persistence and Degradability:**  
 Biodegradation is not applicable for inorganic substances such as ammonium chloride.
- 12.2 Bioaccumulative Potential:**  
 Not expected to bioaccumulate.
- 12.3 Mobility in Soil**  
 No mobility in soil is expected. Ammonium chloride is highly soluble and dissociates into ammonia and chloride ions.
- 12.4 Other Adverse Effects:** None known

## SECTION 13: DISPOSAL INFORMATION

- 13.1 Waste Treatment Methods**
- Disposal Method:** This material when discarded is not a hazardous waste as that term is defined by the Resource, Conservation and Recovery Act (RCRA), 40 CFR 261. Dry material may be landfilled or recycled in accordance with local, state and federal regulations. Dispose in accordance with all local, state and federal regulations.
- Empty Container:** No special handling or disposal is required.
- General Comments:** It is the responsibility of the user of this product to characterize wastes generated to determine if the waste meets the definition of hazardous waste. The product uses, transformations, synthesis, mixtures, etc., may render the resulting end product subject to regulation.

## SECTION 14: TRANSPORT INFORMATION

	14.1 UN Number	14.2 UN Proper Shipping Name	14.3 Transport Hazard Class(s)	14.4 Packing Group	14.5 Environmental Hazards
US DOT	None	Not regulated in packages weighing less than 5000 lbs.	None	None	RQ=5000 lbs
EU ADR/RID	None	Not regulated	None	None	Not applicable
IMDG	None	Not regulated	None	None	Not applicable

- 14.6 Special Precautions for User:** None
- 14.7 Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code:**  
 Not determined

## SECTION 15: REGULATORY INFORMATION

- 15.1 Safety, Health and Environment Regulations:**

**Other EU Regulations:** This product is classified and labeled in accordance with Regulation (EC) No 1272/2008. This Safety Data Sheet complies with the requirements of Regulation (EC) No

1907/2006 (REACH)

German WGK: 1

**15.2 Chemical Safety Assessment:**  
Not required.

**Chemical Inventories:**

**US TSCA** All of the components of this material are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory or are exempt.

**Canadian CEPA:** All of the components are listed on the Canadian DSL or are exempt.

**Australia:** All of the components are listed on the AICS inventory or are exempt.

**China:** All the components are listed on the Chinese chemical inventory or are exempt.

**Philippines:** All the components are listed in the Philippine Inventory.

**New Zealand:** All of the components are listed on the New Zealand Inventory of Chemicals.

**Korea:** All of the components are listed on the Korean Existing Chemicals Inventory

## SECTION 16: OTHER INFORMATION

**EU Classes and Risk Phrases for Reference (See Sections 2 and 3):**

Xi Irritant

Xn Harmful

R22 Harmful if swallowed

R36 Irritating to eyes.

R36/38 Irritating to eyes and skin.

**GHS/CLP Hazard Classes and Statements for Reference (See Sections 2 and 3):**

H302 Harmful in contact with skin.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

**SDS Date of Preparation/Revision:** October 16, 2014

**Revision History:** Conversion to GHS format. Changes in all Sections.

**References:**

- A. NLM ChemID Plus Database
- B. REACH Registration for Ammonium Chloride
- C. NLM Hazardous Substances Databank
- D. OECD SIDS Ammonium Chloride

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