

## Ammonium sulphate

## SECTION 1. IDENTIFICATION

<b>Product Identifier</b>	Ammonium sulphate
<b>Other Means of Identification</b>	21-0-0
<b>Recommended Use</b>	Plant nitrogen source.
<b>Restrictions on Use</b>	None known.
<b>Supplier</b>	TerraLink Horticulture Inc., 464 Riverside Road, Abbotsford, BC, V2S 7M1, 1-800-661-4559
<b>Emergency Phone No.</b>	CANUTEC, In the event of an emergency involving dangerous goods, call 613-996-6666 or *666 on a cellular phone.
<b>SDS No.</b>	0076
<b>Date of Preparation</b>	March 15, 2016

## SECTION 2. HAZARDS IDENTIFICATION

**GHS Classification**

Not classified under any GHS hazard classes.

**GHS Label Elements**

Not applicable

**Other Hazards**

None known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Contains no hazardous ingredients. Substance:

Chemical Name	CAS No.	%	Other Identifiers
Ammonium sulfate	7783-20-2	99.9	21-0-0

## SECTION 4. FIRST-AID MEASURES

**First-aid Measures****Inhalation**

Should cause no problems by inhalation. Get medical advice/attention if you feel unwell or are concerned.

**Skin Contact**

Rinse with lukewarm, gently flowing water for 5 minutes.

**Eye Contact**

Rinse the contaminated eye(s) with lukewarm, gently flowing water for at least 15 minutes. If wearing contact lens(es), remove after 5 minutes and continue rinsing for at least 10 minutes seek medical attention if condition persists.

**Ingestion**

If ingested in large amounts, give 2-3 glasses of water and induce vomiting. Call a doctor.

**First-aid Comments**

Get medical advice/attention if you feel unwell or are concerned.

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## **Most Important Symptoms and Effects, Acute and Delayed**

None known.

## **Immediate Medical Attention and Special Treatment**

### **Target Organs**

None known.

### **Special Instructions**

Treat symptomatically.

### **Medical Conditions Aggravated by Exposure**

None known.

## **SECTION 5. FIRE-FIGHTING MEASURES**

### **Extinguishing Media**

#### **Suitable Extinguishing Media**

Used in a solution as a fire retardant and to fight fires. Use media suitable to extinguish source of fire.

#### **Unsuitable Extinguishing Media**

None known.

### **Specific Hazards Arising from the Chemical**

Does not burn.

Releases NH<sub>3</sub> and Sulfur Oxides when decomposing. If accidentally mixed with oxidizers it will sensitize these materials and make them more reactive under fire conditions.

### **Special Protective Equipment and Precautions for Fire-fighters**

No special precautions are necessary.

See Skin Protection in Section 8 (Exposure Controls/Personal Protection) for advice on suitable chemical protective materials.

## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

### **Personal Precautions, Protective Equipment, and Emergency Procedures**

No special precautions are necessary. Use the personal protective equipment recommended in Section 8 of this safety data sheet.

### **Environmental Precautions**

May be used as a fertilizer using good agronomic practices.

### **Methods and Materials for Containment and Cleaning Up**

Contain spill. Sweep up and scoop into suitable container for use or recycle.

### **Other Information**

None known.

## **SECTION 7. HANDLING AND STORAGE**

### **Precautions for Safe Handling**

Avoid prolonged contact with skin. Use dust mask if material is dusty. Separate from strong oxidizers such as chlorates, nitrates and nitrites.

### **Conditions for Safe Storage**

Store in cool, dry area--preferably on pallets off of floor.

## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Exposure to this material can be controlled in many ways. The measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure. This general information can be used to help develop

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specific control measures. Ensure that control systems are properly designed and maintained. Comply with occupational, environmental, fire, and other applicable regulations.

#### **Appropriate Engineering Controls**

The hazard potential of this product is relatively low. General ventilation is usually adequate.

#### **Individual Protection Measures**

##### **Eye/Face Protection**

Not required but it is good practice to wear safety glasses or chemical safety goggles.

##### **Skin Protection**

Not required, if used as directed.

## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

### **Basic Physical and Chemical Properties**

<b>Appearance</b>	Light white - brown fine powder. Absorbs moisture from the air.
<b>Odour</b>	Odourless (Ammonium sulfate)
<b>Odour Threshold</b>	Not applicable
<b>pH</b>	4 - 4 (10% solution)
<b>Melting Point/Freezing Point</b>	Not applicable (melting); Not applicable (freezing)
<b>Initial Boiling Point/Range</b>	Not applicable
<b>Flash Point</b>	Not applicable
<b>Evaporation Rate</b>	Not available
<b>Flammability (solid, gas)</b>	Not applicable
<b>Upper/Lower Flammability or Explosive Limit</b>	Not applicable (upper); Not applicable (lower)
<b>Vapour Pressure</b>	Does not form a vapour.
<b>Vapour Density (air = 1)</b>	Not applicable
<b>Relative Density (water = 1)</b>	1.769 at 20 °C (68 °F) (Ammonium sulfate)
<b>Solubility</b>	76.4 g/100 mL (Very soluble (more than 50 g/100 mL)) in water; Insoluble in alcohols (e.g. ethanol).
<b>Partition Coefficient, n-Octanol/Water (Log Kow)</b>	5.1 at 25 °C (77 °F) (Ammonium sulfate)
<b>Auto-ignition Temperature</b>	Not applicable
<b>Decomposition Temperature</b>	280 °C (536 °F) (Ammonium sulfate)
<b>Viscosity</b>	Not applicable (kinematic); Not applicable (dynamic)
<b>Other Information</b>	
<b>Physical State</b>	Solid
<b>Molecular Weight</b>	132.14
<b>Bulk Density</b>	66 - 69 lb/ft <sup>3</sup>

## **SECTION 10. STABILITY AND REACTIVITY**

### **Reactivity**

None known.

### **Chemical Stability**

Normally stable.

### **Possibility of Hazardous Reactions**

None known.

### **Conditions to Avoid**

None known.

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### Incompatible Materials

Oxidizing agents (e.g. peroxides).  
None known.

### Hazardous Decomposition Products

Some possible thermal decomposition product are very toxic and corrosive sulfur dioxide, sulfur trioxide, ammonia, and nitrogen (an asphyxiant). Thermally decomposes when heated to temperatures above 280 deg C.

## SECTION 11. TOXICOLOGICAL INFORMATION

Information presented below is for the entire product, unless otherwise specified.

### Likely Routes of Exposure

Inhalation; skin contact; eye contact.

### Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Ammonium sulfate		640-4,250 mg/kg (rat)	> 2,000 mg/kg (rat)

Fish 96-hour LC50 is greater than 13.6-159.8 mg total NH<sub>3</sub>/L; Daphnia 96-hour LC50: greater than 27 mg total NH<sub>3</sub>/L. Slightly-toxic to aquatic organisms. (TFI Product Testing Results)

### Skin Corrosion/Irritation

Not a skin irritant.

### Serious Eye Damage/Irritation

May cause mild eye irritation.

### STOT (Specific Target Organ Toxicity) - Single Exposure

#### Inhalation

No known significant effects or critical hazards.

#### Skin Absorption

Not expected to be absorbed.

#### Ingestion

No information was located.

### Aspiration Hazard

Not known to be an aspiration hazard.

### STOT (Specific Target Organ Toxicity) - Repeated Exposure

No information was located.

### Respiratory and/or Skin Sensitization

Not a respiratory sensitizer. Not a skin sensitizer.

### Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Ammonium sulfate	Not Listed		Not Listed	Not Listed

Not known to cause cancer.

### Key to Abbreviations

ACGIH® = American Conference of Governmental Industrial Hygienists. NTP = National Toxicology Program. OSHA = US Occupational Safety and Health Administration. IARC = International Agency for Research on Cancer.

### Reproductive Toxicity

#### Development of Offspring

Not known to harm the unborn child.

#### Sexual Function and Fertility

No information was located.

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**Effects on or via Lactation**

No information was located.

**Germ Cell Mutagenicity**

Not known to be a mutagen.

**Interactive Effects**

No information was located.

**SECTION 12. ECOLOGICAL INFORMATION**

None listed.

**Toxicity**

No information was located.

**Persistence and Degradability**

No ingredient of this product or its degradation products is known to be highly persistent.

**Bioaccumulative Potential**

This product and its degradation products are not known to bioaccumulate.

**Mobility in Soil**

If released into the environment, this product can move rapidly through the soil.

**Other Adverse Effects**

There is no information available.

**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal Methods**

Dispose of according to local, provincial and federal government requirements.

**SECTION 14. TRANSPORT INFORMATION**

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations.

**Special Precautions** Not applicable

**Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable

**SECTION 15. REGULATORY INFORMATION****Safety, Health and Environmental Regulations**

Not on the 302 list of SARA reportable quantities.

**Canada****WHMIS Classification**

Not a WHMIS controlled product.

**Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)**

Domestic Substances List / Non-Confidential.

**CEPA - National Pollutant Release Inventory (NPRI)**

Part 1A Ammonia (total).

**USA****Toxic Substances Control Act (TSCA) Section 8(b)**

Listed on the TSCA Inventory.

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## SECTION 16. OTHER INFORMATION

<b>NFPA Rating</b>	<b>Health - 0    Flammability - 0    Instability - 0</b> <b>Based on</b> Ammonium sulfate
<b>SDS Prepared By</b>	Regulatory and Technical Resources
<b>Phone No.</b>	604-557-1497
<b>Date of Preparation</b>	March 15, 2016
<b>Date of Last Revision</b>	February 05, 2016
<b>Key to Abbreviations</b>	ACGIH® = American Conference of Governmental Industrial Hygienists AIHA = American Industrial Hygiene Association IARC = International Agency for Research on Cancer NFPA = National Fire Prevention Association NIOSH = National Institute for Occupational Safety and Health NTP = National Toxicology Program OSHA = US Occupational Safety and Health Administration RTECS® = Registry of Toxic Effects of Chemical Substances
<b>References</b>	Supplier's Material Safety Data Sheet registry of Toxic Effects of Chemical Substances (RTECS®) database. Accelrys, Inc. Available from Canadian Centre for Occupational Health and Safety (CCOHS). CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).
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