SECTION 1: Identification

1.1 Product Identifier:
Ammonium Sulfate 21-0-0/24 S

1.2 Other means of identification:
Granular; Coarse; Standard; NRich; S-Sul; Solugreen; NPAC; MPAC; N-Sul-Ate

1.3 Recommended use of the chemical and restriction on use
Recommended use *fertilizers; herbicide adjuvant; fermenting processes; fire extinguishing compounds; tanning hides and water treatment.

*The “Recommended use” identified for this product is provided solely to comply with a US Federal requirement and is not part of the seller’s published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller’s sales agreement.

1.4 Supplier’s details:
   Company:
   American Plant Food Corporation
   903 Mayo Shell Road
   P.O. Box 584
   Galena Park, TX 77547
   1-800-634-2861

1.5 Emergency Phone Number:
   CHEMTREC: 1-800-424-9300
   American Plant Food Corporation: 1-800-634-286

SECTION 2: Hazards Identification


2.1 Classification or the substance or mixture:
(GHS – US)
   Eye Irritant 2B H320
   Specific Target Organ Toxicity 4 H335
   Acute Toxicity Dermal 5 H313
   Acute Toxicity Oral 5 H303

2.2 Labeling elements:
   GHS-US labeling
Hazard pictograms (GHS-US):

GHS07

Signal word (GHS-US): Warning

Hazard statements (GHS-US):

H303 – May be harmful if swallowed in large quantities
H313 – May be harmful in contact with skin
H320 - Causes eye irritation
H335 - May cause respiratory irritation

Precautionary statements (GHS-US):

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P264 - Wash hands and forearms thoroughly after handling
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P312 - Call a poison center/doctor/… if you feel unwell
P337+P313 - If eye irritation persists: Get medical advice/attention
P403+P233 - Store in a well-ventilated place. Keep container tightly closed
P501 - Dispose of contents/container to ... specify in accordance with local/regional/national regulations

2.3 Other hazards
No specific dangers known, if the regulations/notes for storage and handling are considered.

Labeling of special preparations (GHS):
The following percentage of the mixture consists of component(s) with unknown hazards regarding the acute toxicity: 99-100% inhalation: dust.

SECTION 3: Composition/Information on ingredients

3.1 Substance

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Content (W/W)</th>
<th>Chemical name</th>
</tr>
</thead>
<tbody>
<tr>
<td>7783-20-2</td>
<td>&gt;99.5%</td>
<td>Ammonium sulfate</td>
</tr>
</tbody>
</table>

3.2 Mixture
Not applicable

SECTION 4: First-aid measures

4.1 Description of necessary first aid measures

First aid measures general advice: Remove contaminated clothing.

First aid measures after inhalation: After inhalation of dust. Fresh air. If difficulties occur: Seek medical attention. After inhalation of decomposition products: Keep patient calm, remove to fresh air, seek medical attention.

First aid measures after skin contact: Wash thoroughly with soap and water.

First aid measures after eye contact: Wash affected eyes for at least 15 minutes under running water with eyelids held open. Seek medical attention.

First aid measures after ingestion: Rinse mouth immediately and then drink plenty of water, seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Not expected to present a significant hazard under anticipated conditions of normal use.

4.3 Indication of any immediate medical attention and specific treatment needed

Note to physician: Treatment: After inhalation of decomposition products: Pulmonary oedema prophylaxis.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable media: Carbon dioxide, water spray, foam, dry powder, sand

5.2 Specific hazards arising from the chemical

ammonia, can be emitted at 235 °C

5.3 Advice for firefighters

Product itself is non-combustible; fire extinguishing method of surrounding areas must be considered. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Protection during firefighting: Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

SECTION 6: Accidental release measures
SAFETY DATA SHEET
Ammonium Sulfate 21-0-0 24S
Granular; Coarse; Standard; NRich; S-Sul; Solugreen; NPAC; MPAC; N-Sul-Ate

6.1 Personal precautions, protective equipment and emergency procedures
Non-emergency personnel:
Do not get in eyes, on skin, or on clothing. Take appropriate protective measures (use PPE suggested in section 8).

Emergency responders:
Do not get in eyes, on skin, or on clothing. Take appropriate protective measures (use PPE suggested in section 8).

6.2 Environmental precautions
Do not discharge into drains/surface waters/groundwater. Retain and dispose of contaminated wash water.

6.3 Methods and material for containment and cleaning up
For large amounts:
Sweep/shovel up.

For residues:
Sweep/shovel up. Rinse away with water.

SECTION 7: Handling and storage
7.1 Precautions for safe handling
Precautions for safe handling:
Keep away from sources of ignition – no smoking. Handle in accordance with good industrial hygiene and safety practice. Avoid all sources of ignition: heat, sparks, open flame.

7.2 Conditions for safe storage, including any incompatibilities
General advice: Protect against moisture. The substance/product may cake under the influence of moisture.

Storage incompatibility: General advice: Segregate from alkalis and alkalizing substances. Segregate from nitrites and alkaline substances.

SECTION 8: Exposure controls/personal protection
8.1 Control parameters
No specific information available

8.2 Exposure controls
Respiratory protection:
Observe OSHA regulations for respirator use (29 CFR 1910.134). Wear a NIOSH-certified (or equivalent) respirator as necessary.

Hand protection:
Wear chemical resistant protective gloves, eg. Nitrile
### SAFETY DATA SHEET
Ammonium Sulfate 21-0-0 24S
Granular; Coarse; Standard; NRich; S-Sul; Solugreen; NPAC; MPAC; N-Sul-Ate

Revision date: 2/17/2016  
Version: 3.0

- rubber (0.4 mm), chloroprene rubber (0.5 mm); polyvinylchloride (0.7 mm), and other, Consult with glove manufacturer for testing data.

**Eye protection:** Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles).

**Body protection:** Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

**General safety and hygiene measures:** At the end of the shift the skin should be cleaned and skin-care agents applied.

**Other information:** Do not eat, drink, or smoke during use.

### SECTION 9: Physical and chemical properties

#### 9.1 Information of basic chemical and physical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Solid/crystalline</td>
</tr>
<tr>
<td>Color</td>
<td>White to Yellowish Tint</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>Approximately 5.1 (100 g/l, 20°C)</td>
</tr>
<tr>
<td>Melting point (decomposition)</td>
<td>Approx. 305°C</td>
</tr>
<tr>
<td>Onset of boiling (other)</td>
<td>The substance / product decomposes</td>
</tr>
<tr>
<td>Sublimation point</td>
<td>No applicable information available.</td>
</tr>
<tr>
<td>Flashpoint (other)</td>
<td>The substance / product is non-combustible.</td>
</tr>
<tr>
<td>Flammability</td>
<td>Not flammable (other)</td>
</tr>
<tr>
<td>Flammability of Aerosol Products</td>
<td>Not applicable, the product does not form flammable aerosols</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>0.0000001 hPa (25°C) (measured) Literature data.</td>
</tr>
<tr>
<td>Density</td>
<td>1.766 g/cm³ (20°C)</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.77 (25°C, 1,013 hPa) (other) Literature data)</td>
</tr>
<tr>
<td>Bulk density</td>
<td>1,000 kg/m³ (20°C)</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not applicable, the product is a</td>
</tr>
</tbody>
</table>
**SECTION 10: Stability and Reactivity**

10.1 Reactivity  
No hazardous reactions if stored and handles as prescribed/indicated.

10.2 Chemical stability  
The product is stable if stored and handles as prescribed/indicated.

10.3 Possibility of hazardous reactions  
Evolution of ammonia under influence of alkalis. Reacts with alkalis and nitrites.

10.4 Conditions to avoid  
Protect from atmospheric humidity.

10.5 Incompatible materials  
Alkaline reactive substances, nitrites.
10.6 Hazardous decomposition products
Ammonia

SECTION 11: Toxicological Information

11.1 Information on toxicological effects

Primary routes of exposure
Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

a) Acute toxicity
Assessment of acute toxicity: Of low toxicity after single ingestion. Of low toxicity after short-term skin contact.

<table>
<thead>
<tr>
<th>LD50 oral rat</th>
<th>4,250 mg/kg (BASF Test)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 dermal rat</td>
<td>&gt; 2,000 mg/kg (Literature data)</td>
</tr>
<tr>
<td>Ammonium sulfate (7783-20-2)</td>
<td></td>
</tr>
</tbody>
</table>

b) Irritation / corrosion
Assessment of irritating effects: May be irritating to the skin. Dust is irritating to the eyes.

c) Serious eye damage / irritation
Can cause eye irritation.

d) Respiratory or skin Sensitization
Assessment of sensitization: Skin sensitizing effects were not observed in animal studies.

e) Germ cell mutagenicity
Assessment of mutagenicity: The substance was not mutagenic in bacteria. The substance was not mutagenic in mammalian cell culture. The substance was not mutagenic in studies with mammals.

f) Carcinogenicity
Assessment of carcinogenicity: In long-term animal studies in which the substance was given in high concentrations by feed, a carcinogenic effect was not observed.

g) Reproductive toxicity
Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

h) **STOT single exposure**
May cause respiratory irritation.

i) **STOT repeated exposure**
Not classified. Based on available data, the classification criteria are not met.

j) **Aspiration Hazard**
Not classified

**SECTION 12: Ecological Information**

### 12.1 Toxicity

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fish</strong></td>
<td>LC50 (Oncorhynchus mykiss) (96 h) 53 mg/l (fish test acute)</td>
</tr>
<tr>
<td><strong>Aquatic invertebrates</strong></td>
<td>EC50 (Ceriodaphnia sp.) (48 h) 121.7 mg/l (Daphnia test acute, static)</td>
</tr>
<tr>
<td><strong>Aquatic plants</strong></td>
<td>EC50 Chlorella vulgaris (18 d) 2,770 mg/l (growth rate). The details of the toxic effect relate to the nominal concentration.</td>
</tr>
<tr>
<td><strong>Chronic Toxicity</strong></td>
<td>EC10 (70 d) 3.12 mg/l (semistatic)</td>
</tr>
<tr>
<td><strong>Soil living organisms</strong></td>
<td>LC50 (14 d) 201 mg/kg, Eisena foetida (artificial soil). *This product has not been tested. The statement has been derived from substances/products of a similar structure of composition.</td>
</tr>
<tr>
<td><strong>Other terrestrial non-mammals</strong></td>
<td>Study not justified.</td>
</tr>
<tr>
<td><strong>Toxicity to microorganisms</strong></td>
<td>OECD Guideline 209 aquatic EC20 (0.5 h) (activated sludge); approx.1,050 mg/l *This product has not been tested. The statement has been derived from substances/products of a similar structure of composition.</td>
</tr>
</tbody>
</table>

### 12.2 Persistence and degradation

| Assessment biodegradation and elimination (H₂O) | Inorganic product which cannot be eliminated from water by biological purification processes. Can be oxidized to nitrate, or be reduced to nitrogen by microorganisms. |

### 12.3 Bioaccumulative potential
Assessment bioaccumulation potential | Accumulation in organisms is not to be expected.

**12.4 Mobility in soil**

| Assessment transport between environmental compartments | Adsorption to solid soil phase is expected from ammonium. Sulfate soil adsorption will not occur. |

**SECTION 13: Disposal considerations**

**Waste disposal of substance**
Dispose of in accordance with national, state, and local regulations.

**Container disposal**
Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

**SECTION 14: Transport Information**

**Land transport**
USDOT: Not classified as a dangerous good under transport regulations

**Sea transport**
IMDG: Not classified as a dangerous good under transport regulations

**Air transport**
IATA/ICAO: Not classified as a dangerous good under transportation regulation

**SECTION 15: Regulatory Information**

**Federal Regulations**
Registration status:
Chemical TSCA, US released / listed
OSHA hazard category: No data available.

EPCRA 311/312 (Hazard categories): Not hazardous;

**State regulations**
State RTK CAS Number Chemical name
MA, NJ, PA 7783-20-2 Ammonium sulphate
SECTION 16: Other Information

Recommended use: fertilizers Chemical Intermediate process chemical Fire extinguishing compounds Laboratory chemicals

NFPA Hazard codes:
Health: 1 Fire: 0 Reactivity: 0 Special:
HMIS III rating
Health: 1 Flammability: 0 Physical hazard: 0

NFPA and HMIS use a numbering scale ranging from 0 to 4 to indicate the degree of hazard. A value of zero means that the substance possesses essentially no hazard; a rating of four indicates extreme danger. Although similar, the two rating systems are intended for different purposes, and use different criteria. The NFPA system was developed to provide an on-the-spot alert to the hazards of a material, and their severity, to emergency responders. The HMIS system was designed to communicate workplace hazard information to employees who handle hazardous chemicals. We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

SDS Prepared by:
APF Technical Staff
SDS Prepared on: 2/17/16
www.apfcorp.net

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