

Material Safety Data Sheet

Sulf-N® Ammonium Sulfate

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:	Sulf-N® Ammonium Sulfate
OTHER/GENERIC NAMES:	Ammonium sulfate; Diammonium sulfate
PRODUCT USE:	Fertilizer
MANUFACTURER:	Honeywell 101 Columbia Road Box 1053 Morristown, New Jersey 07962-1053

FOR MORE INFORMATION CALL:

(Monday-Friday, 8:00am-5:00pm)
1-800-707-4555

IN CASE OF EMERGENCY CALL:

(24 Hours/Day, 7 Days/Week)
1-800-707-4555 or Chemtrec 1-800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME	CAS NUMBER	WEIGHT %
Ammonium Sulfate	7783-20-2	95

Trace impurities and additional material names not listed above may also appear in Section 15 toward the end of the MSDS. These materials may be listed for local "Right-To-Know" compliance and for other reasons.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Colorless to dark brown crystals or granules. Odorless. Dust may cause irritation to skin, eyes, nose, throat and lungs. Avoid breathing dust.

POTENTIAL HEALTH HAZARDS

SKIN:	Irritation may result from prolonged skin contact.
EYES:	Contact with dust or mist may cause eye irritation.
INHALATION:	Dust inhalation may irritate nose, throat and lungs.
INGESTION:	Not generally considered toxic. If swallowed, irritation may develop in the mouth, esophagus, stomach, etc. The sulfate ion may cause purging.
DELAYED EFFECTS:	None known.

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Ingredients found on one of the OSHA designated carcinogen lists are listed below.

INGREDIENT NAME	NTP STATUS	IARC STATUS	OSHA LIST
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No ingredients listed in this section.

4. FIRST AID MEASURES

SKIN:	Wash promptly with soap and water and flush with water until chemical is removed. Remove any contaminated clothing and wash before reuse. Get medical attention for irritation.
EYES:	Flush promptly with plenty of water for at least 15 minutes. Get medical attention.
INHALATION:	Remove to fresh air. If breathing is difficult, give oxygen if a qualified operator is available. Get medical attention for irritation or discomfort.
INGESTION:	If conscious, drink 2 to 4 glasses of water and induce vomiting by touching back of throat with finger.
ADVICE TO PHYSICIAN:	No specific advice. Treat according to symptoms present.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT:	Not applicable.
FLASH POINT METHOD:	Not applicable.
AUTOIGNITION TEMPERATURE:	Not applicable.
UPPER FLAME LIMIT (volume % in air):	Not applicable.
LOWER FLAME LIMIT (volume % in air):	Not applicable.
FLAME PROPAGATION RATE (solids):	Not applicable.
OSHA FLAMMABILITY CLASS:	Not flammable.
EXTINGUISHING MEDIA:	Any standard agent may be used. If involved in a fire, flood with water.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	Decomposes at elevated temperatures to produce toxic fumes of ammonia and sulfur oxides. If mixed with strong oxidizers such as ammonium nitrate or potassium salts (nitrite, nitrate or chlorate), a vigorous reaction or explosion may occur.
SPECIAL FIRE FIGHTING PRECAUTIONS/INSTRUCTIONS:	Since toxic gases may be released violently at high temperatures, firefighters should wear full protective clothing and NIOSH-approved, self-contained breathing apparatus. Use water to keep fire-exposed containers cool.

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6. ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL OR OTHER RELEASE: (Always wear recommended personal protective equipment.) Shovel up large spills (dry chemical) for use or disposal. Sweep up small spills and maximize recovery. Flush residue with water if permitted by applicable disposal regulations.

Spills and releases may have to be reported to Federal and/or local authorities. See Section 15 regarding reporting requirements.

7. HANDLING AND STORAGE

NORMAL HANDLING: (Always wear recommended personal protective equipment.) Avoid contact with eyes, skin and clothing. Avoid breathing dust. Keep containers closed and avoid rough handling. Follow good personal hygiene and housekeeping practices.

STORAGE RECOMMENDATIONS: Store in a cool, dry place away from strong oxidizers, such as chlorates, nitrates and nitrites.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide local exhaust, if dusty conditions prevail.

PERSONAL PROTECTIVE EQUIPMENT	
SKIN PROTECTION:	To minimize skin contact, wear long-sleeve shirt, trousers and gloves for routine product handling and use.
EYE PROTECTION:	Under dusty or misty conditions, wear chemical safety goggles. Do not wear contact lenses.
RESPIRATORY PROTECTION:	Where dusty or misty conditions require it, use a NIOSH-approved dust or mist respirator for needed protection.
ADDITIONAL RECOMMENDATIONS:	None generally required.

EXPOSURE GUIDELINES			
INGREDIENT NAME	ACGIH TLV	OSHA PEL	OTHER LIMIT
Ammonium Sulfate	Nuisance Dust: mg/m ³ TLV – total	Nuisance Dust: 15 Mg/m ³ TLV - Respirable	None

OTHER EXPOSURE LIMITS FOR POTENTIAL DECOMPOSITION PRODUCTS: None

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9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Colorless to dark brown crystals or granules.
PHYSICAL STATE:	Solid
MOLECULAR WEIGHT:	132.14
CHEMICAL FORMULA:	(NH ₄) ₂ SO ₄
ODOR:	odorless
SPECIFIC GRAVITY (water = 1.0):	(Water = 1.0) 1.77
SOLUBILITY IN WATER (weight %):	(Weight %) 38% solution @ 20°C
pH:	5.5 (1.3% solution)
BOILING POINT:	Not applicable.
MELTING POINT:	Not applicable.
VAPOR PRESSURE:	Not applicable.
VAPOR DENSITY (air = 1.0):	Not applicable.
EVAPORATION RATE:	Not applicable.
% VOLATILES:	Not applicable.
FLASH POINT:	Not applicable.

(Flash point method and additional flammability data are found in Section 5.)

10. STABILITY AND REACTIVITY

NORMALLY STABLE (Conditions to avoid): Stable under normal conditions. Avoid temperatures above 280°C (536°F) - decomposes.

INCOMPATIBILITIES: Oxidizers; e.g., potassium salts - nitrite, nitrate, chlorate; also, chlorine and hypochlorite. Avoid contact with zinc-clad, copper and copper-bearing materials.

HAZARDOUS DECOMPOSITION PRODUCTS: Ammonia and sulfur trioxide and sulfur dioxide gases

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

IMMEDIATE (ACUTE) EFFECTS:

LD₅₀ (oral-rat): 3000 mg/kg

Skin irritation -A single dermal dose of 0.5 g elicited transient (reversible) mild dermal irritation in the rabbit.

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DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS: Eye irritation -A single ocular dose of 100 mg elicited transient (reversible) moderate ocular irritation in the rabbit.

There was no evidence of skin sensitization seen in guinea pigs.

OTHER DATA: None.

12. ECOLOGICAL INFORMATION

Degradability - Not applicable.

Aquatic toxicity: Daphnia magna: 25 hr. TLm: 423 mg/l
 50 hr. TLm: 433 mg/l
 100 hr. TLm: 292 mg/l

Seedling Emergence -There were no treatment related signs of phytotoxicity and no adverse effects on seedlings noted.

13. DISPOSAL CONSIDERATIONS

RCRA: **Is the unused product a RCRA hazardous waste if discarded?** No.
 If yes, the RCRA ID number is: Not applicable.

OTHER DISPOSAL CONSIDERATIONS: One use of ammonium sulfate is as a fertilizer; therefore, waste ammonium sulfate might be used as a fertilizer. If discarded to waterways, it may promote eutrophication. Disposal must be in accordance with applicable disposal regulations. Users should consult with appropriate regulatory agencies before discharging or disposing of waste material.

The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

14. TRANSPORT INFORMATION

US DOT PROPER SHIPPING NAME: Not regulated.

US DOT HAZARD CLASS: Not applicable.

For additional information on shipping regulations affecting this material, contact the information number found in Section 1.

15. REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT (TSCA)

TSCA INVENTORY STATUS: Material is on the TSCA Inventory.

OTHER TSCA ISSUES: None.

SARA TITLE III/CERCLA

RQs & TPQs: "Reportable Quantities" (RQs) and/or "Threshold Planning Quantities" (TPQs) exist for the following ingredients.

INGREDIENT NAME	SARA/CERCLA RQ (lb)	SARA EHS TPQ (lb)
None	None	None

Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center [(800) 424-8802] and to your Local Emergency Planning Committee.

SECTION 311 HAZARD CLASS: Immediate

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SARA 313 TOXIC CHEMICALS:

The following ingredients are SARA 313 "Toxic Chemicals". CAS numbers and weight percents are found in Section 2.

INGREDIENT NAME	COMMENT
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None.

STATE RIGHT-TO-KNOW

In addition to the ingredients found in Section 2, the following are listed for state right-to-know purposes.

INGREDIENT NAME	WEIGHT %	COMMENT
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None

ADDITIONAL REGULATORY INFORMATION: None

WHMIS CLASSIFICATION (CANADA): Not determined.

FOREIGN INVENTORY STATUS: Not determined.

16. OTHER INFORMATION

CURRENT ISSUE DATE: December 2002

PREVIOUS ISSUE DATE: May 2002

CHANGES TO MSDS FROM PREVIOUS ISSUE DATE ARE DUE TO THE FOLLOWING:

1. Corporate name changed to Honeywell.
2. Information and emergency telephone numbers changed.
3. Use TM and remove "45" from the tradename.

OTHER INFORMATION: None