

MATERIAL SAFETY DATA SHEET

**VIVANTIS TECHNOLOGIES SDN BHD
REVONGEN CORPORATION CENTER**

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SECTION 1: CHEMICAL IDENTIFICATION

Catalogue Number: PC0902-500g

Product Name: Ammonium Sulfate

Intended Use:

For research use only. Not for use in diagnostic procedures.

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SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	EC No.	%
Ammonium Sulfate_	7783-20-2	231-964-1	95-100

Synonyms: Ammonium sulphate, diammonium sulphate

SECTION 3: HAZARDS IDENTIFICATION

GHS Classification

Skin irritation – Category 2

Eye irritation – Category 2

GHS Label elements, including precautionary statements



Signal word: Warning

Hazard statements

- H315 Causes skin irritation
- H319 Causes serious eye irritation
- H335 May cause respiratory irritation

Precautionary statements

- P261 Avoid breathing dust, fume, gas, mist, vapors or spray.
- P264 Wash hands thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P302 + P352 If on skin, wash with plenty of soap and water if contact with skin.
- P304 + P340 If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing.

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SECTION 4: FIRST-AID MEASURES

In case of eye contact, rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

In case of skin contact, wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

In case of inhalation, move to fresh air. If not breathing, give artificial respiration.

In case of ingestion, clean mouth with water and later drink plenty of water.

SECTION 5: FIRE FIGHTING MEASURES

Not flammable.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Use water spray, regular foam, dry chemical or carbon dioxide.

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH and full protective gear.

Hazardous decomposition products formed under fire conditions: Nitrogen oxides, sulphur oxides, ammonia

Flash point: Not determined.

Explosion data – sensitivity to mechanical impact: Not sensitive.

Explosion data – sensitivity to static discharge: Not sensitive.

SECTION 6: ACCIDENTAL RELEASE MEASURES

For personal protection, use personal protective equipment. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

For environmental precautions, prevent further leakage or spillage if safe to do so.

For cleaning up, avoid dust formation. Pick up and transfer to properly labeled containers for disposal according to local regulations. Ventilate area and wash spill site after material pickup is complete.

SECTION 7: HANDLING AND STORAGE

Handle in accordance with good industrial hygiene and safety practice. Do not breathe vapors/dust.

Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible with strong oxidizing agents and strong bases.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye/Face protection	Use face shield and safety goggles with side-shields.
Respiratory protection	Irritation is experienced if exceeded exposure limits. NIOSH/MSHA approved respiratory protection should be worn at all time. In case of exposure to high airborne contaminant concentrations, positive pressure-supplied air respirators may be required. Respiratory protection must be provided in accordance with current local regulations.
Skin and body protection	Wear protective gloves/ clothing.
Use engineering measures such as showers, eyewash stations and ventilation system.	
Handle in accordance with good industrial hygiene and safety practice	

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White
Physical state:	Crystalline powder
Odor:	No information available
Odor threshold:	No information available
Density:	No information available
pH:	No information available
Melting point:	280°C
Freezing point:	No information available
Initial Boiling point:	No information available
Boiling point:	No information available
Flash point:	Not applicable
Autoignition temperature:	No data available
Decomposition temperature:	No information available
Upper Flammability limit in air:	No data available
Lower Flammability limit in air:	No data available
Explosive properties:	No information available
Oxidizing properties:	No information available
Solubility:	No information available
Partition coefficient (n-octanol/water):	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Evaporation rate:	No data available
Specific gravity:	No data available
Viscosity:	No information available

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SECTION 10: STABILITY AND REACTIVITY

Stable under recommended storage conditions.

Materials to avoid:	Strong oxidizing agents and strong bases.
Hazardous decomposition products:	Nitrogen oxides, ammonia and sulphur oxides.
Hazardous polymerization:	Hazardous polymerization does not occur.
Conditions to avoid:	None known based on information supplied.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity:

Causes skin, eye and respiratory tract irritation.

Oral LD50:	Rat – 2000 mg/kg
Inhalation LC50:	No data available
Dermal LD:	No data available

Chronic toxicity:

No known effect based on information supplied

Target organ effects: Eyes, skin, respiratory system.

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity:

Harmful to aquatic organisms.

LC50:	Fish – <i>Leuciscus idus</i> – 460-1000 mg/L – 96 hrs
	Fish – <i>Cyprinus carpio</i> – 18 mg/L – 96 hrs
	Fish – <i>Brachydanio rerio</i> – 250 mg/L – 96 hrs
	Fish – <i>Pimephales promelas</i> – >100 mg/L – 96 hrs
EC50:	<i>Daphnia magna</i> (water flea) & other aquatic invertebrates – 14 mg/L – 48 hrs
	<i>Daphnia magna</i> (water flea) & other aquatic invertebrates – 423 mg/L – 24 hrs

<u>Partition coefficient</u>	<u>Unit</u>
-5.1 25°C	Log Pow

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SECTION 13: DISPOSAL CONSIDERATIONS

Dispose waste material in accordance with all federal, state and local environmental regulation.
For contaminated packing, dispose as waste material.

SECTION 14: TRANSPORT INFORMATION

DOT (US)

Not regulated.

IATA

Not regulated.

SECTION 15: REGULATORY INFORMATION

International Inventories

TSCA	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

U.S Federal Regulations

SARA 313 Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulation, Part 372:

SARA 313 threshold values of ammonium sulphate: 1.0%

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

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Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any substances regulated as hazardous air pollutant (HAPs) under Section 112 of the Clean Air Act Amendments of 1990.

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

International Regulations

Mexico – Grade

No information available.

WHMIS Hazard Class

D2B Toxic materials



SECTION 16: OTHER INFORMATION

The information contained in this MSDS relates only to the material(s) designed and does not relate to use(s) in combination with any other material, process(es) and /or chemical reaction(s). Vivantis Technologies Sdn. Bhd. provides this information in good faith, from sources believed to be accurate; however, Vivantis assumes no liability for its accuracy or completeness, and thus shall not be held liable for any damage resulting from handling or from contact with the above product.

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