Nutrien
Feeding the Future™

SAFETY DATA SHEET

SULFATE PLUS, COMPACTED, 20-0-0 AMMONIUM SULFATE

Section 1. Identification

Product identifier : SULFATE PLUS, COMPACTED, 20-0-0 AMMONIUM SULFATE

Product code : 497, 1997

Chemical name : Ammonium sulfate

SDS # : N-2391

Other means of identification : This safety data sheet applies to the following:
Sulfate Plus 20-0-0 Compacted Fines
Sulfate Plus Compacted 20-0-0

Product type : Solid.

Relevant identified uses of the substance or mixture and uses advised against

Identified uses
Fertilizer. Manufacture of specialty fertilizers.

Uses advised against
Not applicable.

Supplier's details : Agrium Canada Partnership (A Subsidiary of Nutrien Ltd.)
13131 Lake Fraser Drive S.E.
Calgary, AB, Canada T2J 7E8

Telephone no. : 1-800-524-0132

Email : sds@nutrien.com

Emergency telephone number (with hours of operation) : CHEMTREC (24 hrs) 1-800-424-9300 or +1-703-527-3887

Section 2. Hazard identification

Classification in accordance with the Hazardous Products Regulations (SOR/2015-17; SOR/2022-272)

Classification of the substance or mixture : Not classified.

GHS label elements

Hazard pictograms : Not applicable.

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

Hazards not otherwise classified : Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.

Section 3. Composition/information on ingredients

Substance/mixture : Substance

Chemical name : Ammonium sulfate

Ingredient name	% (w/w)	Identifiers
ammonium sulfate	> 95	CAS: 7783-20-2

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove person to fresh air and keep comfortable for breathing. If exposed person is not breathing, give artificial respiration or oxygen applied by trained personnel. Get medical attention if symptoms occur.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards. May cause irritation due to mechanical action.

Inhalation : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Skin contact : No known significant effects or critical hazards. May cause irritation due to mechanical action.

Ingestion : May be harmful if swallowed.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
redness

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
gastrointestinal irritation

Indication of immediate medical attention and special treatment needed, if necessary

Section 4. First-aid measures

Notes to physician : Treat symptomatically and supportively. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. Decontamination measures may be necessary. Personnel and equipment must be checked and decontaminated prior to leaving the area.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Non-flammable. Material will not burn. Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Thermal decomposition at or above 235 °C (455°F) may generate ammonia.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
nitrogen oxides
sulfur oxides
ammonia gas

Special protective actions for fire-fighters : No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Contain and collect the water used to fight the fire for later treatment and disposal.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused adverse impacts (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Put on appropriate personal protective equipment (see Section 8). Move containers from spill area. Recover the material and use it for the intended purpose.
or
Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

Large spill : Put on appropriate personal protective equipment (see Section 8). Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Use appropriate equipment to put the spilled substance in a container for reuse or disposal. Recycle to process, if possible.
or
Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid contact with eyes, skin and clothing. Do not ingest. Avoid breathing dust.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. May form steep piles that can collapse without warning when transported or stored in bulk. This may damage equipment and endanger workers. The risk of cliffing and sudden collapse increases if product is loaded or stored when hot or in high humidity conditions. Avoid forming steep slopes when removing product. If product has caked, cliffed, or has adhered to the storage or transport container, stay out of the potential engulfment zone in case the material collapses. Do not enter bins, railcars or trucks without conducting a risk assessment and following all confined space entry requirements. Ensure that consideration is given to fall protection and mobile equipment securement if applicable. Carefully loosen the set product from outside the container using mechanical vibration, sledge hammers, or other devices.

Ensure that bulk bags or smaller packaged products stored in tiers are stacked, racked, blocked, interlocked, or otherwise secured to prevent sliding, rolling, or collapse. Use caution when opening truck or railcar doors as product may have shifted during transport.

Must be stored in a dry location. Absorbs moisture on long-term storage under high humidity conditions. Store away from incompatible materials (see Section 10). When product is stored in sealable containers, keep container tightly closed and sealed until ready for use. Sealable containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Particulates not otherwise classified (PNOC)	**CA Quebec Provincial.** (Canada) TWA 8 hours: 10 mg/m³ (Particulates not otherwise classified (PNOC)). **CA Ontario Provincial (Canada)** TWA 8 hours: 10 mg/m³ (Particles (Insoluble or Poorly Soluble) Not Otherwise Specified). Form: Inhalable fraction. TWA 8 hours: 3 mg/m³ (Particles (Insoluble or Poorly Soluble) Not Otherwise Specified).

Section 8. Exposure controls/personal protection

	Form: Respirable fraction.

Biological exposure indices

No exposure indices known.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Contact your personal protective equipment supplier to verify the compatibility of the equipment for the intended purpose.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state : Solid. [Granular]

Color : Grayish - Brown

Odor : Odorless to slight hydrocarbon scent.

Odor threshold : Not available.

pH : 4.9 [Conc. (% w/w): 40%]

Melting point/freezing point : Decomposes

Boiling point or initial boiling point and boiling range : Not applicable.

Section 9. Physical and chemical properties

Flash point : [Product does not sustain combustion.]

Evaporation rate : Not available.

Flammability : Non-flammable.

Lower and upper explosion limit/flammability limit : Not applicable.

Vapor pressure : 0 kPa (0 mm Hg)

Relative vapor density : Not applicable.

Relative density : Not available.

Density : 0.971 g/cm³

Bulk density : 61 lb/ft³

Solubility(ies) :

Media	Result
water	Soluble

Solubility in water : 767 g/l

Miscible with water : Yes.

Partition coefficient: n-octanol/water : Not applicable.

Auto-ignition temperature : Not applicable.

Decomposition temperature : 235.01°C (455°F)

Viscosity : Not applicable.

Particle characteristics

Median particle size : 2.9 mm

Section 10. Stability and reactivity

Reactivity : Not considered to be reactive.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Hygroscopic. Store in a well-ventilated, dry place. Protect from moisture. Keep container tightly closed.

Incompatible materials : Strong acids, strong alkalis, halogenated compounds, oxidizing agents, chlorinated hydrocarbons, and metals (including their alloys) : copper, zinc.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result
ammonium sulfate	**Rat - Oral - LD50** 2840 mg/kg **Rat - Dermal - LD50** >2000 mg/kg

Conclusion/Summary [Product] : May be harmful if swallowed.

Skin corrosion/irritation

Conclusion/Summary [Product] : No significant irritation expected other than possible mechanical irritation.

Serious eye damage/eye irritation

Conclusion/Summary [Product] : No significant irritation expected other than possible mechanical irritation.

Respiratory corrosion/irritation

Conclusion/Summary [Product] : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Respiratory or skin sensitization

Skin

Conclusion/Summary [Product] : No known significant effects or critical hazards.

Respiratory

Conclusion/Summary [Product] : No known significant effects or critical hazards.

Germ cell mutagenicity

Conclusion/Summary [Product] : No known significant effects or critical hazards.

Carcinogenicity

Conclusion/Summary [Product] : No known significant effects or critical hazards.

Reproductive toxicity

Conclusion/Summary [Product] : No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure)

Section 11. Toxicological information

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on the likely routes of exposure

Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eye contact : No known significant effects or critical hazards. May cause irritation due to mechanical action.

Inhalation : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Skin contact : No known significant effects or critical hazards. May cause irritation due to mechanical action.

Ingestion : May be harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
redness

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
gastrointestinal irritation

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : See above.

Potential delayed effects : See below.

Long term exposure

Potential immediate effects : See above.

Potential delayed effects : See below.

Potential chronic health effects

Conclusion/Summary [Product] : No known significant effects or critical hazards.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Section 11. Toxicological information

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
ammonium sulfate	2840	2500	N/A	N/A	N/A

Other information

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result
ammonium sulfate	**Acute - LC50 - Fresh water** Crustaceans - Water flea - *Ceriodaphnia dubia* - Young 15 mg/l [48 hours] **Acute - LC50 - Fresh water** Fish - Bluegill - *Lepomis macrochirus* 3.1 ppm [96 hours]

Conclusion/Summary [Product] : Harmful to aquatic life. May be harmful to the environment if released in large quantities. Excessive nutrient runoff to a body of water may result in eutrophication.

Persistence and degradability

Not available.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/Water partition coefficient : Not available.

Other adverse effects

No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill

Section 13. Disposal considerations

should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	TDG Classification	DOT Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

Canadian lists

Canadian NPRI : The following components are listed: ammonium sulfate

CEPA Toxic substances : None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : All components are listed or exempted.

Canada : All components are listed or exempted.

China : All components are listed or exempted.

Eurasian Economic Union : **Russian Federation inventory**: All components are listed or exempted.

Japan : **Japan inventory (CSCL)**: All components are listed or exempted.
Japan inventory (ISHL): Not determined.

Section 15. Regulatory information

New Zealand	:	All components are listed or exempted.
Philippines	:	All components are listed or exempted.
Republic of Korea	:	All components are listed or exempted.
Taiwan	:	All components are listed or exempted.
Thailand	:	All components are listed or exempted.
Turkey	:	All components are listed or exempted.
United States	:	All components are active or exempted.
Viet Nam	:	All components are listed or exempted.

Section 16. Other information

History

Date of issue/Date of revision	:	5/5/2026
Date of previous issue	:	8/10/2021
Version	:	3
Key to abbreviations	:	ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor DOT = Department of Transportation GHS = Globally Harmonized System of Classification and Labelling of Chemicals HPR = Hazardous Products Regulations IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods IMO = International Maritime Organization LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available SGG = Segregation Group TDG = Transportation of Dangerous Goods UN = United Nations

Procedure used to derive the classification

Not classified.

Indicates information that has changed from previously issued version.

Notice to reader

Supply chain partners must ensure they pass this SDS, and all other relevant safety information to their customers.

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Section 16. Other information

purpose.

FURTHERMORE, THE RECIPIENT ASSUMES ALL RISK IN CONNECTION WITH THE USE OF THE MATERIAL. THE RECIPIENT ASSUMES ALL RESPONSIBILITY FOR ENSURING THE MATERIAL IS USED IN A SAFE MANNER IN COMPLIANCE WITH APPLICABLE ENVIRONMENTAL, HEALTH, SAFETY AND SECURITY LAWS, POLICIES AND GUIDELINES. THE SUPPLIER DOES NOT WARRANT THE MERCHANTABILITY OF THE MATERIAL OR THE FITNESS OF THE MATERIAL FOR ANY PARTICULAR USE AND ASSUMES NO RESPONSIBILITY FOR INJURY OR DAMAGE CAUSED DIRECTLY OR INDIRECTLY BY OR RELATED TO THE USE OF THE MATERIAL.