

SAFETY DATA SHEET



SECTION 1: IDENTIFICATION

Company Information	KALO, Inc., 13200 Metcalf Ave., Ste. 250, Overland Park, KS 66213
Phone Numbers	800-255-5196 / 913-491-9146 FAX
Website	www.kalo.com
Product Name	AMS STANDARD
Reference/Item Number	AMSSTD2000
Intended Use	Fertilizers, Herbicide Adjuvant, Water Treatment
Product Identifier	Ammonium Sulfate 21-0-0/24 S
Other Means of Identification:	Granular, Coarse, Standard, NRich, S-Sul, solugreen, NPAC, MPAC, N-Sul-Ate
24 HOUR EMERGENCY NUMBER/CHEMTREC (USA)	1-800-424-9300
POISON CONTROL CENTER (USA)	1-800-222-1212

SECTION 2: HAZARDS IDENTIFICATION

HAZARD COMMUNICATION STANDARD (HCS) PICTOGRAM(S) AND SIGNAL WORD(S)



WARNING

Eye Irritant 2B:	H320: Causes eye irritation.
STOT-SE 4:	H335: May cause respiratory irritation.
Acute Tox (skin) 5:	H313: May be harmful in contact with skin.
Acute Tox (oral) 5:	H303: May be harmful if swallowed in large quantities.
Prevention:	P261: Avoid breathing dust, fume, gas, mist, vapors and spray. P264: Wash thoroughly after handling.
Response:	P312: Call a poison center/doctor if you feel unwell. P305+351+338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do; continue rinsing. P337+313: If eye irritation persists, get medical advice/attention. P302+352: IF ON SKIN: Wash with plenty of soap and water. P332+313: If skin irritation occurs, get medical advice/attention. P363: Wash contaminated clothing before reuse. P304+340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Storage:	P403: Store in a well-ventilated place. P233: Keep bag tightly closed.
Disposal:	P501: Dispose of contents/container in accordance with local/national regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

This product is labeled with the following GHS classifications, as it contains substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations. This product is a proprietary blend and the ingredients and mixture percentages are being withheld as confidential business information.

Ingredient/Chemical Designations:	Ammonium Sulfate
CAS No.:	7783-20-2
Weight %:	>99.5%
Notes:	[1] Substance classified with a health or environmental hazard.

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SECTION 4: FIRST AID MEASURES

[DESCRIPTIONS]

General:	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
Inhalation:	Remove to fresh air. Keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious, place in the recovery position and obtain immediate medical attention. Give nothing by mouth.
Eyes:	Irrigate copiously with clean fresh water for at least 10 minutes, holding the eyelids apart and seek medical attention.
Skin:	Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser. Do NOT use solvents or thinners.
Ingestion:	If accidentally swallowed, obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

[MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED]

Overview:	No adverse symptoms or effects anticipated under normal handling conditions. See Section 2 for further details.
Eyes:	Causes eye irritation.
Skin:	May be harmful in contact with skin.
Respiratory:	May cause respiratory irritation.
Ingestion:	May be harmful if swallowed in large quantities.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing Media:	Carbon dioxide, water spray, foam, dry powder, sand.
Special Hazards:	Ammonia can be emitted at 235°C.
Advice For Firefighters:	Evacuate area. Prevent contamination from run-off of adjacent areas, streams, drinking water and sewers. Do not flush down sewers or other drainage systems. Exposed firefighters must wear standard protective equipment and in enclosed areas self-contained breathing apparatus. Use water-spray to cool fire-exposed surfaces and personnel.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Precautions/Procedures:	Keep all sources of ignition away from spill/release. In case of a major spill or spillage in a confined space evacuate the area and check vapor levels. Do not get into eyes, on skin or onto clothing. Take appropriate protective measures (see Section 8).
Environmental Precautions:	Do not discharge into drains, surface waters or ground water. Retain and dispose of contaminated wash water.
Methods and Material For Containment and Cleaning Up:	Sweep/shovel up. Rinse away with water. Ventilate the area and avoid breathing vapors. Take the personal protective measures listed in Section 8. Contain and absorb spillage with non-combustible materials (e.g. sand/earth/vermiculite). Place in closed containers outside buildings and dispose of according to the Waste Regulations (see Section 13). Clean, preferably with a detergent. Do not use solvents. Do not allow spills to enter drains or water courses. If drains, sewers, streams or lakes are contaminated, inform the local water company immediately. In the case of contamination of rivers, streams, or lakes, the Environmental Protection Agency should also be informed.

SECTION 7: HANDLING AND STORAGE

Precautions For Safe Handling:	Protect against moisture. The substance/product may cake under the influence of moisture. Do not get in eyes, on skin, or on clothing. Do not breathe vapors or mists. Keep bag closed. Use only with adequate ventilation. Use good personal hygiene practices. Wash hands before eating, drinking, smoking. Remove contaminated clothing and wash before reuse. Destroy contaminated belts and shoes and other items that cannot be decontaminated. Have eyewash accessible to use in handling area. See Section 2 for further details.
Conditions For Safe Storage:	Store in tightly closed bags in dry, well-ventilated area, away from excessive heat and incompatibles. See Section 2 for further details.
Incompatible Materials:	Alkaline reactive substances. Nitrites.
Specific End Use(s):	See technical data sheet.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Data:	This product contains no ingredients (at greater than 0.1%) with established limits for exposure under OSHA, ACGIH and/or NIOSH.
Carcinogen Data:	This product contains no ingredients (at greater than 0.1%) that are suspected of being or known to be a carcinogen under OSHA, NTP or IARC.
[PERSONAL PROTECTIVE EQUIPMENT]	
Respiratory:	If workers are exposed to concentrations above the exposure limit, they must use the appropriate certified respirators.
Eyes:	Wear safety eyewear with shields (e.g. safety spectacles/goggles/visors) to protect against the splash of liquids.
Skin:	Overalls, which cover the body, arms, and legs, should be worn. Skin should not be exposed. Wear chemical resistant protective gloves, e.g.: nitrile rubber (0.4mm), chloroprene rubber (0.5mm), polyvinylchloride (0.7mm). All parts of the body should be washed after contact.
Engineering Controls:	Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates, and any vapor below occupational exposure limits, suitable respiratory protection must be worn.
Other Work Practices:	Do not eat, drink or smoke during use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White to Yellowish Tint Crystals
Odor:	Odorless
Odor Threshold:	Not Measured
pH (100g/l, 20°C):	Approximately 5.1
Specific Gravity:	Not Measured
Flashpoint:	Not Combustible
Solubility in Water:	764 g/l @ 20°C 843 g/l @ 50°C
Viscosity (cSt):	Not Applicable
Vapor Pressure (Pa):	0.0000001 hPa @ 25°C (measured)
Density:	1.766 g/cm ³ @25°C
Relative Density:	1.77 @25°C (1,013 hPa) (other)
Bulk Density:	1,000 kg/m ³ @ 20°C
Vapor Density:	Not Applicable. Product is a non-volatile solid.
Melting/Freezing Points:	Approximately 305°C. This product decomposes.
Initial Boiling Point/Range (°F/°C):	No Determined
Flammability (Solid,Gas):	Not Flammable. Does not form flammable aerosols.
Decomposition Temperature:	>25°C. Do not overheat.
Auto-Ignition Temperature:	Not self-igniting.
Partition Co-Efficient n-octanol/water (Log Pow):	Not Applicable
Evaporation Rate (Ether=1):	Not Applicable
Particle Size Diameter:	Coarse/S-Sul/Solugreen: >0.9-1.3mm N-Sul-Ate: >0.9-1.3mm Granular/N-Rich: >2mm MPAC: >1.5mm NPAC: >3.5mm Standard: <0.9mm

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SECTION 10: STABILITY AND REACTIVITY

Reactivity:	No hazardous reactions if stored and handled as prescribed/indicated.
Chemical Stability:	Stable if stored and handled as prescribed/indicated.
Hazardous Reactions:	Evolution of ammonia under influence of alkalis. Reacts with alkalis and nitrites.
Conditions To Avoid:	Protect from atmospheric humidity.
Incompatible Materials:	Alkaline reactive substances. Nitrites.
Hazardous Decomposition Products:	Ammonia

SECTION 11: TOXICOLOGICAL INFORMATION

	[ACUTE TOXICITY ESTIMATE]
Ingredients:	Ammonia Sulfate (7783-20-2)
Oral LD50mg/kg:	4,250 mg/kg (rat)/Category: NA
Skin LD50mg/kg:	>2,000 mg/kg (rat)/Category: NA
Inhalation Vapor LC50mg/L/4hr:	No Data Available
Inhalation Dust/Mist LC50mg/L/4hr:	No Data Available

ITEM	HAZARD	CATEGORY
Acute Toxicity (mouth):	May be harmful if swallowed in large quantities.	5
Acute Toxicity (skin):	May be harmful in contact with skin.	5
Acute Toxicity (inhalation):	Not Applicable	--
Skin Corrosion/Irritation:	Not Applicable	--
Eye Damage/Irritation:	Causes eye irritation.	2B
Sensitization (respiratory):	Not Applicable	--
Sensitization (skin):	Not Applicable	--
Germ Toxicity:	Not Applicable	--
Carcinogenicity:	Not Applicable	--
Reproductive Toxicity:	Not Applicable	--
Specific Target Organ Systemic Toxicity-Single Exposure:	May cause respiratory irritation.	4
Specific Target Organ Systemic Toxicity-Repeated Exposure:	Not Applicable	--
Aspiration Hazard:	Not Applicable	--

SECTION 12: ECOLOGICAL INFORMATION

Toxicity:	No additional information provided for this product.
Persistence and Degradability:	Inorganic product which cannot be eliminated from water by biological purification processes. Can be oxidized to nitrate, or be reduced to nitrogen by microorganisms.
Bioaccumulative Potential:	Not to be expected.
Mobility In Soil:	Adsorption to solid soil phase is expected from ammonium. Sulfate soil adsorption will not occur.
Results of PBT and vPvB Assess:	This product contains no PBT/vPvB chemicals.
Other Adverse Effects:	No data available.

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SECTION 13: DISPOSAL CONSIDERATIONS

Waste Treatment Methods:

Do not allow into drains or water courses. Wastes and emptied containers should be disposed of in accordance with regulations made under the Control of Pollution Act and the Environmental Protection Act. Using information provided in this data sheet advice should be obtained from the Waste Regulation Authority, whether the special waste regulations apply. Dispose of contents in accordance with local and national regulations.

SECTION 14: TRANSPORT INFORMATION

DOT Proper Shipping Name: Not Regulated

DOT Hazard Class: Not Applicable

DOT Packing Group: Not Applicable

DOT Label: None

IMDG Proper Shipping Name: Not Regulated

IMDG Hazard Class: Not Applicable

IMDG Packing Group: Not Applicable

IMDG Marine Pollutant: No

ICAO/IATA: See Bill of Lading

SECTION 15: REGULATORY INFORMATION

Regulatory Overview: The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

Toxic Substance Control Act (TSCA): All ingredients of this product are listed on the TSCA inventory, or are not required to be listed on the TSCA inventory.

WHMIS Classification: D2B

U.S. EPA Tier II Hazards: Fire=NO / Sudden Release of Pressure=NO / Reactive=NO / Immediate (acute)=NO / Delayed (chronic)=NO

EPCRA 302–Extremely Hazardous (0.1%): To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 311/312–Chemicals and RQs (>0.1%): To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 313–Toxic Chemicals (>0.1%): To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65–Carcinogens (>0.0%): To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65–Developmental Toxins (>0.0%): To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65–Female Repro Toxins (>0.0%): To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65–Male Repro Toxins (>0.0%): To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

N.J. RTK Substances (>1%): To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

PENN RTK Substances (>1%): To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

SECTION 16: OTHER INFORMATION

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. Company accepts no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations and orders.