PROFERTIL

SAFETY DATA SHEET

Product	Personal Protection Elements
AMMONIUM SULFATE	 **Gloves**  **Respiratory protection**  **Safety goggles**

SECTION 1. PRODUCT IDENTIFICATION	
GHS Product identifier	Ammonium sulfate
Other means of identification	Does not have
Recommended use of the chemical and restrictions on use In the agricultural industry as fertilizer.	**EMERGENCY PHONE NUMBER 24 HS** (0291) 459-8188/8008,(0291) 154-050421 Security (0291) 154-050419 Safety Health (0291) 459-8196 – Medical Service
SUPPLIER Imported	**DISTRIBUTOR** Profertil S.A. Terminal San Nicolás, Provincia de Buenos Aires - Argentina

SECTION 2. HAZARD IDENTIFICATION

Clasification of the substance	**Clasification**		**Labeled**				
			Pictogram				
	Hazard class	**Hazard category**	**GHS**	**Model Regulations of the UN**	**Signal word**	**Hazard indication**	**Hazard indication code**
	Not applicable.						
Summary	It is not classified as hazardous matter in accordance with Directive 92/32 / EEC and Regulation (CE) nº1272 / 2008 [CLP]. The product is not considered toxic to humans. It is not carcinogenic, mutagenic or teratogenic according to ACGIH, EPA, IARC, OSHA. Its decomposition can affect aquatic life. Contact with dust from this product may cause irritation to the eyes, respiratory tract and skin.						

SECTION 3. INFORMATION ON INGREDIENTS

Composition: Pure **Comercialization:** granulated in bag and in bulk

Common name	**Synonyms of the Substance**	**CAS number**	**Chemical family**	**Formula**	**Composition (% by weight)**
Ammonium sulfate	Diammonium Sulfate	7783-20-2	Ammonium Salt	$(NH_4)_2\ SO_4$	100

SECTION 4. FIRST-AID MEASURES	
Contact with eyes	Contact with dust may cause irritation to the eyes, so immediately rinse the eyes with plenty of water, for at least 15 minutes, keeping the eyelids open. Remove contact lenses if you wear them and if they can be easily removed. Request medical attention.
Contact with skin	Contact with dust may cause skin irritation, so wash the contaminated area with plenty of soap and water. In case of irritation seek medical attention. Remove and wash contaminated clothing and wash before reuse.
Inhalation	Contact with dust may cause irritation to the mucous membranes and upper respiratory tract, so the victim should be transported to a place where they can breathe clean, fresh air and keep it at rest in a position comfortable for breathing. Call a Toxicology Information Center or a Doctor in case of discomfort.

Ingestion	Rinse mouth with water. Call a Toxicology Information Center or a Doctor in case of discomfort. Do not induce vomiting unless directed by medical personnel.
SECTION 5. FIRE-FIGHTING MEASURES	
Suitable extinguishing media	Fire extinguishing agent A/B/C.
Specific hazards arising from the chemical	It is not combustible. Its thermal decomposition can produce ammonia (NH_3), nitrogen oxides (NO_X), phosphorus oxides (PO_X) and water. Water used for emergency containment may be contaminated, proceed according to the corresponding disposal recommendations. (section 6)
Special protective actions for fire-fighters	In the case of fumes or gases, those responsible for controlling the fire must use Structural Equipment for firefighters and autonomous Breathing equipment. Collect the water used in fire fighting for later reuse or treatment.
SECTION 6. ACCIDENTAL RELEASE MEASURES	
Personal precautions, protective equipment and emergency procedures	Avoid all contact with eyes and skin and respiratory system. Use the corresponding PPEs (section 8). In case of dust generation, ventilation should be provided that allows compliance with occupational exposure limits. Otherwise, the use of a mask should be indicated.
Environmental precautions	Prevent spills from entering drains, surface water courses, groundwater, etc. Avoid the generation of dust.
Methods and materials for containment and cleaning up	Stay with your back to the wind. Absorb and/or contain the spill with inert material and place in a suitable container. Spilled material can be slippery. If the product is contaminated with soil it can be reused as fertilizer. To do this, you must collect the spilled material with mechanical means (manual and/or mechanical shovels, industrial vacuum cleaners, etc.). Do not use water. In case of precipitation, avoid entering water bodies and cover the product with impermeable material until the end of said meteorological condition. Water with recovered urea can be reused as fertilizer.
SECTION 7. HANDLING AND STORAGE	
Precautions for safe handling	Avoid the generation of dust, smoke or fog. Avoid breathing dust. Use outdoors or well ventilated places. Use adequate ventilation to maintain exposure within the allowed limits. Prevent handling with incompatible substances. Do not eat, drink or smoke in work areas. Wash your hands after handling the products. Take off contaminated clothing and PPEs and wash thoroughly before entering the dining rooms. Use the PPEs recommended in section 8. Do not disperse the environment.
Conditions for safe storage	Store in dry, temperate and adequately ventilated areas (if necessary using appropriate technical controls). Keep containers tightly closed and locked. Avoid contact with incompatible substances.
SECTION 8. EXPOSURE CONTROL/PERSONAL PROTECTION	
Control parameters	There are no tables or specific occupational exposure limits. ACGIH TLV-TWA / Res. MTEySS Nº 295/03: (insoluble) Particles not otherwise specified (PNEOF) 10 mg/m³ in 8 hours for inhalable particles and 3 mg/m³ in 8 hours for breathable particles. OSHA PEL: Particulates Not Otherwise Regulated: (PNOR) Total powder: 15 mg/m³ TWA (8 hours), Breathable fraction: 5 mg/m³ TWA (8 hours).
Appropriate engineering controls	Maintain airborne dust concentrations below occupational exposure limits. If necessary, local ventilation by aspiration should be used.

Individual protection measures, personal protective equipment (PPEs)	To avoid contact with skin or eyes, wear long-sleeved clothing that protects the limbs and/or bodysuit, leather/PVC gloves, safety goggles. In the presence of high concentrations of dust in the air, wear waterproof romper, PVC gloves and respiratory protection for approved dust.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES			
Appearence		**Physical state:** Solid (Granulated) **Colour:** white	
Odour	Odourless	**Vapour pressure**	Not applicable
Odour threshold	Not applicable	**Vapour density**	Not applicable
pH (10% sol. in water)	5,5	**Solubility**	43 g/100 ml at 20°C (water) Insoluble in acetone, alcohol.
Melting/Solidification Point	280 ºC	**Partition coefficient: n-octanol/water**	The product is soluble in water.
Initial boiling point and boiling range	Not applicable	**Auto-ignition temperatura**	Not applicable
Flash point	Not applicable	**Decomposition temperatura**	>200 ºC
Evaporation rate	Not applicable	**Relative density**	1,77 (water = 1)
Flammability	Not applicable	**Apparent density**	945 kg/m³ (bagged)
Upper/lower flammability or explosive limits	Not applicable	**Viscosity**	Not available

SECTION 10. STABILITY AND REACTIVITY	
Chemical stability	The product is stable.
Possibility of hazardous reactions	Highly corrosive to aluminum, zinc and copper. Slightly corrosive for steels and stainless steel AISI 304
Conditions to be avoided	High temperatures and humidity.
Incompatible materials	Strong oxidizers: hopochlorites, chlorates, nitrators and nitrites, strong acids (nitric acid and bromine trifluoride).
Hazardous Decomposition Products	Exposure to high temperatures produces toxic gases by thermal decomposition: ammonia (NH_3), nitrogen oxides (NO_X), sulfur oxides (SO_x).
Special Observations	Absorbs moisture from the air. It is hygroscopic. Slow hydrolysis can produce corrosive acids.

SECTION 11. TOXICOLOGICAL INFORMATION	
Acute toxicity	Acute Oral Toxicity: DL_{50}: 3040 mg/kg (rats). Sources Agrium
Skin corrosion/ irritation	Contact with high concentrations of dust may cause skin irritation.
Serious eye damage	Contact with high concentrations of dust may cause irritation on eye contact.
Respiratory or skin sensitization	Contact with high concentrations of dust may cause irritation to the respiratory tract.
Germ cell mutagenicity	It is not classified as mutagenic.
Carcinogenicity	It is not classified as carcinogen.

Reproductive toxicity	It is not classified as toxic for reproduction.
Specific target organ toxicity – single exposure	It is not classified as toxic.
Specific target organ toxicity – repeated exposure	It is not classified as toxic.
Aspiration hazard	Not applicable, if the exposure limits of inhalable dust are not exceeded.
SECTION 12. ECOTOXICOLOGICAL INFORMATION	
Toxicity	Low toxicity in aquatic organisms. CL_{50}: 2,6 mg/l (fresh water) (Crustaceans - Ceriodaphnia dubia - young) in 48 hours. Sources Agrium
Persistence and degradability	Quickly biodegradable. It is not persistent. The decomposition of the product in bodies of water promotes the growth of algae, increasing turbidity, decreasing oxygen concentration and preventing photosynthesis.
Bioaccumulative potential	Low bioaccumulation. Log_{Pow} 5,1. Source: Agrium
Mobility in soil	Not available.
Other adverse effects	Not available.
SECTION 13. DISPOSAL CONSIDERATIONS	
Disposal methods	Recovery and reuse of the material whenever possible.
Manipulation	Place the material in containers suitable for use or disposal. The corresponding PPEs should be used. Discharge to surface water courses or groundwater should be avoided.
Treatment	Depending on the type of contamination, consult Safety Health. In case of not being able to recover and/or reuse the material, treat it as a non-hazardous industrial waste.
SECTION 14. TRANSPORT INFORMATION	
International regulations	This product is not considered as dangerous according to the CNRT (Argentina), Mercosur Dangerous Goods Transportation Agreement [Acuerdo Sobre Transporte de Mercancías Peligrosas del Mercosur].
Special previsions for transport	Land and sea transport: General cargo
Environmental hazards	IMDG: Not regulated IMO: Not regulated ADN: Not regulated RID/ADR: Not regulated IATA: Not regulated
UN Number	Not regulated as hazardous material
UN Proper Shipping Name	Not regulated as hazardous material
Hazard class(es) for transportation	Not regulated as hazardous material
Packing Group	Not regulated as hazardous material

SECTION 15. REGULATORY INFORMATION	
Other Regulations	Mercosur Dangerous Goods Transportation Agreement [Acuerdo Sobre Transporte de Mercancías Peligrosas del Mercosur] National Health and Safety Law No. 19587/72 National Traffic Law No. 24,449 National Hazardous Waste Law No. 24,051 Regulatory Decree No. 351/79 on Health and Safety Resolution 195/97 Technical Standards Res. MTySS 295/03 Chemical Pollutants SRT Resolution No. 801/15 GHS SRT Resolution No. 3359/15, Extension GHS GHS - Globally Harmonized System of Classification and Labeling of Chemicals. 5th Ed. Revised. United Nations, New York and Geneva, 2013. TOMES Plus®, Vol 28, January 1996 Micomedex Inc..
SECTION 16. OTHER INFORMACION	
Glossary	GHS: Globally Harmonized System. ACGIH: American Conference of Governmental Industrial Hygienists. (USA) AIHA WEEL: Workplace Environmental Exposure Level of the American Industrial Hygene Association (USA) Carcinogenic: It is said of the physical, chemical or biological agent that induces the development of cancer. Teratogenic: That generates malformations to the fetus. CAS: Chemical Abstract Service. CL50: Lethal Media Concentration. CNRT: National Commission for Transport Regulation DL_{50}: Mean Lethal Dose, CL_{50}: Lethal Media Concentration. EC_{50}: Concentration with effect in 50% of organisms. IARC: International Agency Research on Cancer Mutagenic: Substance or agent that permanently alters the DNA of cells. OECD: Organization for Cooperation and Development OSHA: Occupational Safety and Health Adm. (USA) Teratogenic: That generates malformations. PEL: Exposure Limit Allowed TLV: Threshold Limit Value TWA: Time weighted average. IATA: International Air Transport Association. IMDG: International Maritime Code of Dangerous Goods IMO: International Maritime Organization. ADN: European Agreement on the International Transport of Dangerous Goods in inland navigation. RID: Regulations for the International Transport of Dangerous Goods by Rail. ADR: "European Agreement on the International Carriage of Dangerous Goods by Road". CMP: Maximum permissible concentration. MTySS: Ministry of Labor and Social Security CLP: Classification, Labeling and Packaging [CE Regulation].
FOR MORE INFORMATION	CONTACT PROFERTIL SA
Date of the Last Revision	Rev. Nº 03 January 20, 2018
Historial of Revision	This document replaces the rev. Nº 02, adapting to the Regulations indicated in the GHS and to Res. SRT No. 801/15 of Argentina.

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