PROFERTIL

SAFETY DATA SHEET

Product	Personal Protection Elements
UAN	 **Gloves**  **Overall**  **Safety goggles**  **Half-mask with filter**

SECTION 1. PRODUCT IDENTIFICATION

GHS Product identifier	UAN
Other means of identification	UAN 32%
Recommended use of the chemical and restrictions on use In the agricultural industry as fertilizer.	**EMERGENCY PHONE NUMBER 24 HS** (0291) 459-8188 - (0291) 459-8008 - Security (0291) 154-050419 – Safety Health (0291) 459-8196 – Medical Service
SUPPLIER CF INDUSTRIES 39018 Highway 3089 Donaldsonville, LA 70346 USA	**DISTRIBUTOR** Profertil S.A. Planta de Fertilizantes, Puerto de Ing. White – Zona Cangrejales, Bahía Blanca, Argentina

SECTION 2. HAZARD IDENTIFICATION

	Clasification		Labeled				
			Pictogram				
	Hazard class	Hazard category	GHS	Model Regulations of the UN	Signal word	Hazard indication	Hazard indication code
Clasification of the substance	**Unclassified**	Not Applicable					
Summary	It can be dangerous if swallowed because it reduces the ability to transport oxygen in the blood (methemoglobinemia), mainly in children and risk groups. Overexposure to aerosols can cause respiratory, dermal or eye irritation. It is not carcinogenic, mutagenic or teratogenic according to ACGIH, EPA, IARC, OSHA.						

SECTION 3. INFORMATION ON INGREDIENTS

Composition: Mixture — **Comercialization:** Bines – Bulk

Common name	Synonyms of the Substance	CAS number	Chemical family	Formula	Composition (% by weight)
Urea	Urea granulated fertilizer	57-13-6	Carbamide - Aliphatic Amide	$CO(NH_2)_2$	34 - 37
Ammonium nitrate	Ammonium salt of nitric acid	6484-52-2	Inorganic Ammonium Salt	NH_4NO_3	42 – 44.5
Water	-	7732-18-5			17 - 24

SECTION 4. FIRST-AID MEASURES	
Contact with eyes	There are no known contact effects, however, IF IN EYES, rinse thoroughly with water for several minutes. Remove contact lenses if worn and easy. Continue washing. In case of eye irritation, consult a doctor.
Contact with skin	There are no known contact effects, however, IF IN CLOTHING: Immediately flush contaminated clothing and skin with plenty of water before removing clothing. Remove contaminated clothing and wash before reuse.
Inhalation	Exposure to degradation products may cause health risks. IN CASE OF INHALATION, transport the victim outside and keep them at rest in a position comfortable for breathing. Call a poison control center or a doctor in case of discomfort
Ingestion	A fertilizer based on ammonium nitrate, can be irritating to the mouth, throat and stomach. It can cause methemoglobinemia (a condition that interferes with the ability to transport oxygen from the blood), if ingested in large quantities or for a prolonged period of time. IN CASE OF INGESTION, if the affected person requires CPR, avoid mouth-to-mouth contact. Do not induce vomiting. In case of vomiting, try to keep the head lower than the chest so that the vomit does not enter the lungs. Decontaminate face and mouth with water to remove visible material. If the exposed person is conscious and can swallow, give 1-2 sips of water. Rinse mouth. Call a poison control center.
Notes for the doctor	In case of inhalation of decomposition products (carbon monoxide, carbon dioxide, nitrogen oxides) in a fire, symptoms may appear later. The exposed person may need to be kept under medical surveillance for up to 72 hours. In cases of suspected methemoglobinemia, monitor blood levels of methemoglobin. The treatment is supportive; Blue methylene may be indicated based on the severity of the patient.
Prudence advice Prevention	Request special instructions before use - Do not handle the substance before reading and understanding the safety instructions - Use mandatory personal protective equipment. Use only outdoors and with your back to the wind. Do not eat, drink or smoke during use - Wash thoroughly after handling. Wear gloves/clothing/goggles/protective mask.
SECTION 5. FIRE-FIGHTING MEASURES	
Suitable extinguishing media	It is not flammable. In case of fire use suitable means to the environment. If the product dries, use water as a flood. Do not use chemical extinguishers, foam or sand.
Specific hazards arising from the chemical	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides Under normal conditions it is not combustible but can become explosive if combined with a flammable substance and / or dried at a low percentage of water. The pressure may increase and the container may explode in case of heating or fire. It is not an oxidizer at the factory concentration. It may act as a oxidizing liquid if it is concentrated by evaporation.
Special protective actions for fire-fighters	In case of fire, quickly isolate the area, evacuating all people from the vicinity of the incident site. No action should be taken involving personal risk or without adequate training. Firefighters or those responsible for controlling the fire should wear Autonomous Breathing Equipment and thermal protective clothing. See Section 8.

SECTION 6. ACCIDENTAL RELEASE MEASURES	
Personal precautions, protective equipment and emergency procedures	For people who are not part of the emergency control: Withdraw from the place and avoid contact. For personnel who will control the emergency: Use the Personal Protective equipment described in Section 8. Do not touch spilled material without protection. Place the recovered product in appropriate containers and identify it with the corresponding signage
Environmental precautions	Avoid spillage of product on the environment, especially water courses, waste can exhibit oxidizing properties. Contain and collect the water you use for fire fighting, for further treatment and disposal.
Methods and materials for containment and cleaning up	Large spills: When possible, prepare a dike or barrier for spilled material. To recover, use mechanical means (such as: shovels and buckets) and place in containers, for reuse or disposal. After removing the product, verify the cleanliness of the area. Small spills: Collect material directly with mechanical means. Check the cleanliness of the spilled surface. Never return spilled product to the original container, mixing it with new product. For disposal information, see section 13.
SECTION 7. HANDLING AND STORAGE	
Precautions for safe handling	**Prevention of worker exposure:** Product handling must be done with the personal protection elements mentioned in Section 8. **Fire and explosion prevention:** Not applicable. **Precautions and guidelines for safe handling:** Do not handle the product without having read and understood the safety instructions. When handling, do it wisely, avoid spilling the material. The work area should be limited to people who use adequate safety equipment when handling the product. Avoid contact of the product with the eyes. Do not inhale vapor or mist of the product. **Hygiene measures** **Suitable:** Keep the storage place always tidy, ventilated and marked, wash thoroughly after handling, hands, face, forearms and exposed areas. **Inappropriate:** eating, drinking or smoking in the workplace Remove clothing and personal protective items and clean yourself before eating food, wash your hands before smoking. Do not smoke in the presence of product
Conditions for safe storage	**Appropriate conditions:** Keep in well-closed original containers, stored in clean, tidy areas, protected from direct sunlight in a dry, cool area ventilated and locked. **Conditions to avoid, including any incompatibilities:** May be corrosive to metals, heat and incompatible materials. **Packing materials** **Recommendations:** Keep in original container **Inadequate:** Not available. **Other information:** Store in a dry and ventilated place and stay away from incompatible materials. Keep away from heat or temperature. If regulations exist, store in accordance with local or regional regulations.

SECTION 8. EXPOSURE CONTROL/PERSONAL PROTECTION	
Control parameters	**Occupational exposure limits:** There are no known occupational exposure limits for the mixture. The substance is a liquid mixture (aqueous solution) at room temperature, however the limits of its dry components are reported: For Urea, (PNEOF) CMP 10 mg/m3 for inhalable particles and 3 mg/m3 for respirable Resol SRT 295/03. 5 mg/m3 (TWA) per respirable fraction - OSHA/PEL 2 mg/m3 (TWA) - ACGIH/TLV For Ammonium Nitrate, (PNEOF) CMP 10 mg/m3 for inhalable particles and 3 mg/m3 for respirable Resol SRT 295/03. 5 mg/m3 (TWA) per respirable fraction - OSHA/PEL 2 mg/m3 (TWA) - ACGIH/TLV **Biological indicators:** Not available. **Other limits and values:** Not applicable.
Appropriate engineering controls	There are no special ventilation requirements. General ventilation is usually sufficient. It is recommended to manipulate in open places and work with your back to the wind. Provide station for eye wash.
Individual protection measures, personal protective equipment (PPEs)	Protect yourself from vapors or aerosol projections Wear safety goggles. Wear long-sleeved clothing that protects the extremities, bodysuit and/or PVC apron and PVC or neoprene gloves. Use PVC/neoprene gloves, waterproof leather shoes and approved respiratory protection for ammonia aerosols, all the time of exposure. Discard PPEs that have deteriorated.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES			
Appearence		**Physical state:** liquid **Colour:** Translucid green	
Odour	Slightly ammoniacal	**Vapour pressure**	17.2 mmHg (at 20°C)
Odour threshold	Not available	**Vapour density**	Not available
pH	5.5 – 7.5	**Solubility**	Complete in water
Melting/Solidification Point	Not available	**Partition coefficient: n-octanol/water**	The product is soluble in water
Initial boiling point and boiling range	100 °C	**Auto-ignition temperatura**	Not applicable
Flash point	Not available	**Decomposition temperatura**	Undetermined
Evaporation rate	Undetermined	**Relative density**	Not available
Flammability	Not applicable	**Apparent density**	1.283 Kg/m3
Upper/lower flammability or explosive limits	Not applicable	**Viscosity**	Not available

SECTION 10. STABILITY AND REACTIVITY	
Chemical stability	The product is stable and non-reactive under normal conditions of use, storage and transport.
Possibility of hazardous reactions	Slightly corrosive to zinc, copper and aluminum. If mixed with chlorine or hypochlorites, it can form nitrogen trichloride, which can spontaneously explode on contact with air.
Conditions to be avoided	High temperatures should be avoided.

Incompatible materials	Concentrated acids, strong bases, finely powdered metals (cadmium, copper, lead, cobalt, nickel, bismuth, chromium, magnesium, zinc, sodium, potassium and aluminum). It is explosive when mixed with hypochlorite forming nitrogen trichloride that can explode spontaneously in the air. It can also explode by detonation, heat or shock when it evaporates to dryness.
Hazardous Decomposition Products	Under normal conditions of storage and use, hazardous decomposition products should not be formed. However, exposure to high temperatures produces toxic vapors by thermal decomposition: Ammonia (NH_3), nitrogen oxides (NO_X).
Special Observations	Does not have
SECTION 11. TOXICOLOGICAL INFORMATION	
Acute toxicity by mixture component, routes of entry and test species	
Ammonium nitrate	-*Dermic*: DL_{50}: >5000 mg/kg (- Rat). Not classified -*Oral*: DL_{50}: 2950 mg/kg (-Rat/ Mouse-). Practically non toxic
Skin corrosion/irritation	
Ammonium nitrate	-*Skin:* Rabbit : Not irritating to the skin -*eyes*: conjunctiva edema: Rabbit 3 days The effects are not enough to classify them as dangerous
Serious eye damage	Not described by ammonium nitrate. Contact with high concentrations of dust may cause irritation in contact with the eyes for Urea
UREA	Oral: DL50: 8471 mg/kg (rat – male) Contact with high concentrations of dust may cause skin irritation.
Skin sensitization Ammonium nitrate and UREA	
-*Piel* – Mouse: Non sensitizing	
Germ cell mutagenicity	Ammonium nitrate: OECD 471 – In vitro experiment - Bacteria - Negative Ammonium nitrate OECD 476 - In vitro experiment - Animal Mammal - Negative UREA , It is not classified as mutagenic
Carcinogenicity	Urea, It is not classified as a carcinogen. Ammonium nitrate, possibility of nitrosamine formation if ingested. Do not ingest
Reproductive toxicity	Ammonium nitrate Oral Rat:1500 mg/Kg Negative Maternity Negative Fertility Negative Tox development There are no known significant or critical effects. UREA, It is not classified as toxic for reproduction.
Specific target organ toxicity –single exposure	Ammonium nitrate: Not available UREA, It is not classified as toxic.
Specific target organ toxicity –repeated exposure	Ammonium nitrate: Not available UREA, It is not classified as toxic.
Aspiration hazard	Not applicable if exposure limits for inhalable dusts are not exceeded.
Teratogenicity	There are no known significant or critical effects.
Chronic effects	Not available.

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SECTION 12. ECOTOXICOLOGICAL INFORMATION per component of the mixture

Ammonium nitrate - *- Aquatic Environment (a)*

Acute

Algae	NOEC		>1700 mg/l, 10 days
Daphnia	EC_{50}		490 mg/l, 48 hours
Fish	CL_{50}		447 mg/l, 48 hours

Toxicity	Virtually non-toxic to aquatic organisms. Very low acute toxicity to fish.
Persistence and degradability	According to the criteria of the European Union (EU): Easily biodegradable.
Bioaccumulative potential	Information not available
Mobility in soil	Information not available
Other adverse effects	There are no known significant effects or critical hazards.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods	Discharge into surface or underground water courses should be avoided. Material recovery, whenever possible.
Manipulation	The corresponding PPEs, reported in section 8, should be used. Place the material in appropriate containers and identify them correctly for disposal.
Treatment	Dispose according to applicable legal regulations. Once used, the containers may contain traces of product, observe the warnings indicated on the label after emptying the container.

SECTION 14. TRANSPORT INFORMATION

International regulations	This product is not classified 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: The product is not covered by international rules or by those of the European Union on the transport of dangerous goods. IMO: The product is not classified as Hazardous. ADN: The product is not classified as Hazardous. RID/ADR: It is not covered by international rules or by those of the European Union on the transport of dangerous goods. IATA: The product is not covered by international rules or by those of the European Union on the transport of dangerous goods.
Transport in bulk *according to Annex II of* **MARPOL 73/78 and the IBC Code**	Not applicable.
UN Number	Not regulated.
UN Proper Shipping Name	Not regulated.

Hazard class(es) for transportation	Not regulated.
Packing Group	Not regulated.

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 INFORMATION

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".
FOR MORE INFORMATION	CONTACT PROFERTIL SA
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Historial of Revision	This document replaces the rev. Nº 01 of October 1st, 2009, adapting to the Regulations indicated in the GHS and to Res. SRT No. 801/15 of Argentina.

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