SECTION 1: Identification of the substance/mixture and of the company/undertaking ***

1.1. Product identifier

Ammonii nitras

Item No. 06103000

1.3. Details of the supplier of the safety data sheet

Address/Manufacturer

Hänseler AG
Industriestrasse 35
9100 Herisau

Telephone no.	0041 (0)71 353 58 58
E-mail address of person responsible for this SDS	sdb@haenseler.ch

1.4. Emergency telephone number

Switzerland :145 / Abroad +41 (0)44 251 51 51

SECTION 2: Hazards identification ***

2.1. Classification of the substance or mixture

Classification (Regulation (EC) No. 1272/2008)

Classification (Regulation (EC) No. 1272/2008)

Ox. Sol. 3	H272
Eye Irrit. 2	H319

The product is classified and labelled in accordance with Regulation (EC) No 1272/2008
For explanation of abbreviations see section 16.

2.2. Label elements

Labelling according to regulation (EC) No 1272/2008

Hazard pictograms ***

Signal word ***

Warning

Hazard statements ***

H272	May intensify fire; oxidizer.
H319	Causes serious eye irritation.

Precautionary statements ***

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220	Keep away from clothing and other combustible materials.
P264.1	Wash hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P337+P313	If eye irritation persists: Get medical advice/attention.
P501.3	Disposal in compliance with local and national regulations.

SECTION 3: Composition/information on ingredients ***

Hazardous ingredients ***

ammonium nitrate

CAS No.	6484-52-2	
EINECS no.	229-347-8	
Registration no.	01-2119490981-27-XXXX	
Concentration	>= 50	%

Classification (Regulation (EC) No. 1272/2008)

Ox. Sol. 2	H272
Eye Irrit. 2	H319

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated, soaked clothing immediately and dispose of safely.

After inhalation

Ensure supply of fresh air. If necessary, give oxygen. Take medical treatment. If the patient is likely to become unconscious, place and transport in stable sideways position. Do not use mouth-to-mouth or mouth-to-nose resuscitation. Breathing with the help of a ventilator bag or ventilator.

After skin contact

Wash off immediately with soap and water and rinse well. Consult a doctor if skin irritation persists.

After eye contact

Separate eyelids, wash the eyes thoroughly with water (15 min.). By continuous complaints consult a physician.

After ingestion

Rinse out mouth and give plenty of water to drink. Never give anything by mouth to an unconscious person. By continuous complaints consult a physician.

4.2. Most important symptoms and effects, both acute and delayed

Causes very strong irritations of the eyes, skin and mucous membranes. Nausea, Vomiting, Methaemoglobinaemia

4.3. Indication of any immediate medical attention and special treatment needed

Hints for the physician / treatment

Treat symptomatically

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water spray jet

Non suitable extinguishing media

Foam, Carbon dioxide, Dry powder, Full water jet, Sand

5.2. Special hazards arising from the substance or mixture

In the event of fire the following can be released: Nitrogen oxides (NOx); Ammonia (NH3); Can build mixtures of gas and air which are capable of explosion. The product supports fire.

5.3. Advice for firefighters

Special protective equipment for fire-fighting

Use self-contained breathing apparatus. Wear protective clothing.

Other information

Cool endangered containers with water spray jet. Collect contaminated fire-fighting water separately, must not be discharged into the drains. Fire residues and contaminated fire-fighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep away unprotected persons. Respiratory protection. Use breathing apparatus if exposed to vapours/dust/aerosol. Avoid dust formation. Keep away sources of ignition. Ensure adequate ventilation.

6.2. Environmental precautions

Do not discharge into the drains/surface waters/groundwater. Advise water authority if spillage has entered water course or drainage system.

6.3. Methods and material for containment and cleaning up

Take up mechanically and collect in suitable container for disposal. Ensure adequate ventilation.

6.4. Reference to other sections

Information regarding Safe handling, see Section 7. Information regarding personal protective measures, see Section 8. Information regarding waste disposal, see Section 13.

SECTION 7: Handling and storage ***

7.1. Precautions for safe handling

Advice on safe handling

Avoid dust formation. Keep away from heat and sources of ignition. Provide good ventilation of working area (local exhaust ventilation if necessary). Wear protective equipment. Avoid contact with skin, eyes and clothing. Smoking, eating and drinking should be prohibited in application area.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Keep away from sources of heat and ignition. Hold breathing apparatus.

Classification of fires / temperature class / Ignition group / Dust explosion class

Classification of fires A (Flammable solids)

7.2. Conditions for safe storage, including any incompatibilities

Recommended storage temperature

Value	<	32	°C

Requirements for storage rooms and vessels

Keep in a cool place. Keep only in original container.

Hints on storage assembly

Do not store with combustible materials. Do not store with oxidizing agents.

Further information on storage conditions

Keep container tightly closed, cool and dry. Product is hygroscopic. Protect from heat and direct sunlight.

SECTION 8: Exposure controls/personal protection ***

8.1. Control parameters

Derived No/Minimal Effect Levels (DNEL/DMEL) ***

ammonium nitrate

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	36	mg/m³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	5.12	mg/kg

Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	8.9	mg/m³

Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	2.56	mg/kg

Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	2.56	mg/kg

Predicted No Effect Concentration (PNEC)

ammonium nitrate

Type of value	PNEC	
Type	Freshwater	
Concentration	0.45	mg/l

Type of value	PNEC	
Type	Saltwater	
Concentration	0.045	mg/l

Type of value	PNEC	
Conditions	Short term	
Concentration	4.5	mg/l

Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	18	mg/l

8.2. Exposure controls

General protective and hygiene measures

Remove contaminated, soaked clothing immediately and dispose of safely. Wash hands before breaks and after work. Avoid contact with skin and eyes. Do not inhale dust/fumes/mist.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. Dust mask; Particle filter P1

Hand protection

Protective gloves

Appropriate Material	Natural Latex		
Material thickness		0.5	mm
Breakthrough time	>=	8	h
Gloves			
Appropriate Material	Polychloroprene		
Material thickness		0.5	mm
Breakthrough time	>=	8	h
Gloves			
Appropriate Material	nitrile rubber - NBR		
Material thickness		0.35	mm
Breakthrough time	>=	8	h
Gloves			
Appropriate Material	Butyl rubber - Butyl		
Material thickness		0.5	mm
Breakthrough time	>=	8	h
Gloves			
Appropriate Material	Fluoro carbon rubber - FKM		
Material thickness		0.4	mm
Breakthrough time	>=	8	h
Gloves			
Appropriate Material	PVC		
Material thickness		0.5	mm
Breakthrough time	>=	8	h

Eye protection

Tightly fitting safety glasses

Body protection

Protective clothing

Environmental exposure controls

Do not allow to enter drains or water courses.

SECTION 9: Physical and chemical properties ***

9.1. Information on basic physical and chemical properties

Form solid

Colour white

Odour odourless

Odour threshold

Remarks Not applicable

pH value

Value	5.0	to	6.5
Concentration/H2O	100	g/l	
Temperature	20	°C	

Melting point

Value	169	°C

Initial boiling point and boiling range ***

Remarks Not applicable

Flash point

Remarks Not applicable

Evaporation rate

Remarks not determined

Flammability (solid, gas)

Not applicable

Upper/lower flammability or explosive limits

Remarks No data available

Vapour pressure

Remarks not determined

Vapour density

Remarks No data available

Density

Value		1.72	g/cm³
Remarks	Relative Density according specification		

Solubility in water

Value		1870	g/l

Partition coefficient: n-octanol/water

Remarks Not applicable

Auto-ignition temperature

Remarks No data available

Decomposition temperature

Value	>	210	°C

Oxidising properties

Remarks Oxidizing

9.2. Other information

Other information

oxidizing

SECTION 10: Stability and reactivity ***

10.1. Reactivity

No decomposition if stored and applied as directed.

10.2. Chemical stability

No decomposition if stored and applied as directed.

10.3. Possibility of hazardous reactions

In a fire, hazardous decomposition products may be produced.

10.4. Conditions to avoid

To avoid thermal decomposition, do not overheat. Keep away from oxidising agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

10.5. Incompatible materials

Reactions with acids. Reactions with alkalies. Reactions with oxidising agents. Reactions with combustible substances. Reactions with metals in powder form. Evolution of ammonia under influence of

alkalies.

10.6. Hazardous decomposition products

In the event of fire the following can be released: nitrous oxides (NOx)

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity (Components)

ammonium nitrate

Species	Rats (male/female)	
LD50	2950	mg/kg
Method	OECD 401	

Acute dermal toxicity (Components)

ammonium nitrate

Species	Rats (male/female)	
LC50	> 5000	mg/kg
Method	OECD 402	

Skin corrosion/irritation

Remarks	Irritates the mucous membrane.
Remarks	Irritating to skin.

Serious eye damage/irritation

evaluation	irritant

Sensitization

Remarks	No sensitation effect known.

Sensitization (Components)

ammonium nitrate

Species	mouse
evaluation	non-sensitizing
Method	OECD 429

Subacute, subchronic, chronic toxicity (Components)

ammonium nitrate

Route of exposure	oral	
Species	rat	
NOAEL	> 1500	mg/kg
Repeated exposure		
Method	OECD 422	

Mutagenicity (Components)

ammonium nitrate

evaluation	No experimental information on genotoxicity in vitro available.

ammonium nitrate

evaluation	No experimental indications on genotoxicity in vivo found.

ammonium nitrate

evaluation	No mutagenicity in the Ames-test.
Method	Ames test

Experience in practice

Irritation

SECTION 12: Ecological information ***

12.1. Toxicity

Fish toxicity (Components)

ammonium nitrate

Species	carp (Cyprinus carpio)		
	480		mg/l
Duration of exposure	48	h	
Method	ISO 7346/2 (semistatic)		

Daphnia toxicity (Components) ***

ammonium nitrate

Species	Daphnia magna		
	490		mg/l
Duration of exposure	48	h	

Algae toxicity (Components)

ammonium nitrate

Species	Algae		
	> 1700		mg/l
Duration of exposure	10	d	

Bacteria toxicity (Components)

ammonium nitrate

Species	activated sludge		
	> 1000		mg/l
Duration of exposure	3	h	
Method	OECD 209		

12.2. Persistence and degradability

Biodegradability (Components)

ammonium nitrate

Remarks Not applicable

12.3. Bioaccumulative potential

Partition coefficient: n-octanol/water

Remarks Not applicable

12.4. Mobility in soil

Mobility in soil (Components)

ammonium nitrate

Will not adsorb on soil.

12.5. Results of PBT and vPvB assessment

Evaluation of persistance and bioaccumulation potential (Components)

ammonium nitrate

Does not bioaccumulate.

12.6. Other adverse effects

General information / ecology

Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system. Harmful to aquatic organisms.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations for the product

EWC waste code No not dispose with rubbish.
EWC waste code Should not be released into the sanitary sewer system.
Disposal in compliance with local and national regulations.

Disposal recommendations for packaging

Dispose of as unused product.

SECTION 14: Transport information ***

	Land transport ADR/RID ***	Marine transport IMDG/GGVSee ***	Air transport ICAO/IATA ***
Tunnel restriction code	E		
14.1. UN number	1942	1942	1942
14.2. UN proper shipping name	AMMONIUM NITRATE	AMMONIUM NITRATE	AMMONIUM NITRATE
14.3. Transport hazard class(es)	5.1	5.1	5.1
Label			
14.4. Packing group	III	III	III
Limited Quantity	5 kg		
Transport category	3		

SECTION 15: Regulatory information ***

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Water Hazard Class (Germany) ***

Water Hazard Class (Germany) WGK 3
Remarks Derivation of WGK according to Annex 1 No. 5.2 AwSV

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

Hazard statements listed in Chapter 3

H272 May intensify fire; oxidizer.
H319 Causes serious eye irritation.

CLP categories listed in Chapter 3

Eye Irrit. 2 Eye irritation, Category 2
Ox. Sol. 2 Oxidising solid, Category 2

Supplemental information

Relevant changes compared with the previous version of the safety data sheet are marked with: ***
This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.