

Trade name: Ammonii hydroxidi sol 25%

Substance number: 208251

Version: 5 / CH

Date revised: 10.10.2023

Replaces Version: 4 / CH

Print date: 10.10.23

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

1.1. Product identifier

Ammonii hydroxidi sol 25%

Item No. 20825100

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 sdb@haenseler.ch

person responsible

for this SDS

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)

Skin Corr. 1B H314

Eye Dam. 1 H318

STOT SE 3 H335

Aquatic Acute 1 H400

Aquatic Chronic 3 H412

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

Danger

Hazard statements ***

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

H400 Very toxic to aquatic life.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements ***

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

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P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a POISON CENTER or doctor.

Hazardous component(s) to be indicated on label (Regulation (EC) No. 1272/2008)

contains *** ammonia%

2.3. Other hazards

The product contains no PBT substances. The product contains no vPvB substances. This product does not contain a substance that has endocrine disrupting properties with respect to human. The product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms.

SECTION 3: Composition/information on ingredients *****Chemical characterization**

Mixture of the following listed substances with harmless admixtures.

Hazardous ingredients *****ammonia%**

CAS No.	1336-21-6				
EINECS no.	215-647-6				
Registration no.	01-2119488876-14-XXXX				
Concentration	>= 20	<	25	%	
Classification (Regulation (EC) No. 1272/2008)	Skin Corr. 1B		H314		
	Eye Dam. 1		H318		
	STOT SE 3		H335		
	Aquatic Acute 1		H400		
	Aquatic Chronic 2		H411		

Concentration limits (Regulation (EC) No. 1272/2008)

	STOT SE 3	H335	>= 5	
	Aquatic Acute 1	H400	M = 10	
ATE	oral		350	mg/kg

Additional remarks:

CLP Regulation (EC) No 1272/2008, Annex VI, Note B

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

Remove contaminated, soaked clothing immediately and dispose of safely. Take medical treatment.
 Remove affected person from danger area.

After inhalation

Remove the casualty into fresh air and keep him calm. Irregular breathing/no breathing: artificial respiration. Summon a doctor immediately.

After skin contact

Wash off immediately with soap and water and rinse well. Summon a doctor immediately.

After eye contact

Separate eyelids, wash the eyes thoroughly with water (15 min.). Summon a doctor immediately.

After ingestion

Do not induce vomiting. Summon a doctor immediately. Ensure supply of fresh air. Never give anything

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by mouth to an unconscious person. Rinse out mouth and give plenty of water to drink.

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

Chemical burn

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

Product itself is non-combustible; adapt fire extinguishing measures to surrounding areas.

Non suitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Ammonia (NH₃); In the event of fire the following can be released: Nitrogen oxides (NO_x)

5.3. Advice for firefighters

Special protective equipment for fire-fighting

Use self-contained breathing apparatus. Wear full protective suit.

Other information

Suppress vapours with water spray jet. Cool endangered containers with water spray jet. Collect contaminated fire-fighting water separately, must not be discharged into the drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep away unprotected persons. Ensure adequate ventilation. Avoid contact with eyes and skin. Do not inhale vapours.

6.2. Environmental precautions

Dilute with lot of water. Do not discharge into the drains/surface waters/groundwater.

6.3. Methods and material for containment and cleaning up

Pick up with absorbent material (eg sand, kieselgur, acid binder, universal binder). Ensure adequate ventilation. Send in suitable containers for recovery or disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Keep container tightly closed. Handle and open container with care. Ensure adequate ventilation. For personal protection see Section 8. Avoid inhaling dusts/ billows/ steams. Avoid contact with skin, eyes and clothing.

Advice on protection against fire and explosion

Substance/product does not ignite spontaneously.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Do not use aluminium containers. Do not use containers, lines etc. made of copper or copper alloys. Do not use zinc containers. Keep in a cool place. Keep tightly closed in a dry and cool place. Provide alkali-

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resistant floor. Use polyethylene or polypropylene containers. Use stainless steel containers.

Hints on storage assembly

Do not store with acids. Do not store with oxidizing agents.

Storage classes

Storage class according to TRGS 510	8B	Non-combustible corrosive hazardous substances
Storage category (Switzerland)	8	Caustic and corrosive substances

Further information on storage conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from direct sunlight.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Derived No/Minimal Effect Levels (DNEL/DMEL)****ammonia%**

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Acute	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	6.8	mg/kg

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	6.8	mg/kg

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Acute	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	47.6	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Acute	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	36	mg/m ³

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	47.6	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	

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Mode of action	Local effects	
Concentration	14	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Acute	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	68	mg/kg
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	68	mg/kg
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Acute	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	23.8	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Acute	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	7.2	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	23.8	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	2.8	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Acute	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	6.8	mg/kg
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	

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Concentration	6.8	mg/kg
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Predicted No Effect Concentration (PNEC)**ammonia%**

Type of value	PNEC	
Type	Freshwater	
Concentration	0.0011	mg/l
Type of value	PNEC	
Type	Saltwater	
Concentration	0.00011	mg/l

8.2. Exposure controls**General protective and hygiene measures**

Keep away from food-stuffs, beverages and feed-stocks. Remove contaminated, soaked clothing immediately and dispose of safely. Wash hands before breaks and after work. Avoid contact with skin and eyes. Do not eat, drink or smoke during work time. Wash hands before breaks and after work.

Respiratory protection

Short term: filter apparatus, filter K; At intensive and longer exposition use self-contained breathing apparatus. Respiratory protection according to EN141

Hand protection

Protective gloves
 Appropriate Material The glove material must be sufficient impermeable and resistant to the substance. Check the tightness before wear. Gloves should be well cleaned before being removed, then stored in a well ventilated location.

Hand protection must comply with EN 374.

Appropriate Material	Butyl rubber - Butyl
Material thickness	0.5 mm
Breakthrough time	> 8 h
Appropriate Material	Fluoro carbon rubber - FKM
Material thickness	0.4 mm
Breakthrough time	> 8 h
Not suitable: rubber gloves	
Not suitable: PVC gloves	

Eye protection

Safety glasses with side protection shield; Eye protection must comply with EN 166.

Body protection

Alkali-resistant protective clothing; Clothing as usual in the chemical industry. Protective shoes

SECTION 9: Physical and chemical properties *****9.1. Information on basic physical and chemical properties**

Physical state	liquid
Colour	light yellow, clear
Odour	of ammonia

Freezing point

Value	-44	°C
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Boiling point or initial boiling point and boiling range

Value	44	°C
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Upper and lower explosive limits

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Lower explosion limit	16	%(V)
Upper explosion limit	27	%(V)

Flash point

Value	°C
Remarks	Not applicable

pH value

Value	12	to	13
Concentration/H ₂ O	100	%	

Vapour pressure

Value	358	hPa
Temperature	20	°C

Density and/or relative density

Value	0.90	g/cm ³
Temperature	20	°C

9.2. Other information**Odour threshold**

Value	5	to	25	mg/l
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Solubility in water

Remarks	Completely miscible
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Auto-ignition temperature

Value	651	°C
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Efflux time

Remarks	No data available
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Explosive properties

evaluation	no
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Oxidising properties

evaluation	Not oxidising
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Other information

The product is not dangerous for explosions. Forms explosive mixture with air are possible.

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.

10.4. Conditions to avoid

Heat

10.5. Incompatible materials

Corrodes copper and brass. Strong exothermic reaction with acids. Avoid contact with: Bases, Acids, aluminium (Al), zinc (Zn), copper (Cu), Strong oxidising agents, Hypochlorite

10.6. Hazardous decomposition products

Ammonia

SECTION 11: Toxicological information**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

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Acute oral toxicity

ATE	1'400.56	mg/kg
	02	

Method calculated value (Regulation (EC) No. 1272/2008)

Acute oral toxicity (Components)**ammonia%**

Species	rat	
LD50	350	mg/kg
Source	GESTIS-Stoffdatenbank	

Acute dermal toxicity (Components)**ammonia%**

Remarks No data available.

Acute inhalative toxicity (Components)**ammonia%**

Remarks No data available.

Skin corrosion/irritation

Remarks Corrosive action on the skin and mucous membrane.

Skin corrosion/irritation (Components)**ammonia%**

Species	rabbit
evaluation	corrosive
Method	OECD 404

Serious eye damage/irritation

evaluation irritant - risk of serious damage to eyes

Serious eye damage/irritation (Components)**ammonia%**

Species	rabbit
evaluation	irritant - risk of serious damage to eyes

Sensitization

Remarks No sensitisation effect known.

Sensitization (Components)**ammonia%**

Species	guinea pig
evaluation	non-sensitizing

Subacute, subchronic, chronic toxicity (Components)**ammonia%**

Route of exposure	inhalative	
Species	rat	
NOAEL	0.035	mg/l
Duration of exposure	50	Days

Mutagenicity (Components)**ammonia%**

Species	mouse
evaluation	No experimental indications on genotoxicity in vivo found.
Method	OECD 474

ammonia%

evaluation	No experimental information on genotoxicity in vitro available.
Method	Ames test

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Reproduction toxicity (Components)**ammonia%**

Route of exposure	oral
Species	rat
Dose	408 mg/kg
evaluation	No negative effects
Method	OECD 422

Carcinogenicity (Components)**ammonia%**

Route of exposure	oral
Species	rat
Dose	67 mg/kg
Duration of exposure	104 Weeks
Method	OECD 453
Remarks	negative

Specific Target Organ Toxicity (STOT) (Components)**ammonia%****Single exposure**

evaluation	May cause respiratory irritation. Route of exposure inhalative
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ammonia%**Repeated exposure**

Source	Nicht eingestuft, basierend auf der Berechnungsmethode der CLP Verordnung.
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11.2 Information on other hazards**Endocrine disrupting properties with respect to humans**

The product does not contain a substance that has endocrine disrupting properties with respect to humans.

Experience in practice

After Swallowing: burns in mouth, throat, oesophagus and gastrointestinal tract. Risk of perforation in the oesophagus and stomach.

SECTION 12: Ecological information *****12.1. Toxicity****Fish toxicity (Components)****ammonia%**

Species	rainbow trout (Oncorhynchus mykiss)
LC50	0.89 mg/l
Duration of exposure	96 h

Daphnia toxicity (Components)**ammonia%**

Species	Daphnia magna
LC50	101 mg/l
Duration of exposure	48 h

Algae toxicity (Components)**ammonia%**

Species	Chlorella vulgaris
EC50	2700 mg/l

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Duration of exposure 18 d

Bacteria toxicity (Components)

ammonia%

Remarks No data available.

12.2. Persistence and degradability**Biodegradability (Components)**

ammonia%

evaluation Readily biodegradable

Ready degradability (Components)

ammonia%

12.4. Mobility in soil**Mobility in soil (Components)**

ammonia%

Adsorbs on soil.

12.6 Endocrine disrupting properties**Endocrine disrupting properties with respect to the environment**

The product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms.

12.7. Other adverse effects**General information / ecology**

Do not allow it to reach ground water, water bodies or sewage system. The product causes changes in the pH value in the test system. The result relates to the unneutralized sample.

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

Disposal in compliance with local and national regulations.

SECTION 14: Transport information

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	Land transport ADR/RID	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
Tunnel restriction code	E		
14.1. UN number	2672	2672	2672
14.2. UN proper shipping name	AMMONIA SOLUTION	AMMONIA SOLUTION	AMMONIA SOLUTION
14.3. Transport hazard class(es)	8	8	8
Label			
14.4. Packing group	III	III	III
Limited Quantity	5 l		
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 2

Remarks Derivation of WGK according to Annex 1 No. 5.2 AwSV

National regulations Switzerland

Swiss Toxicity Class 2
SFOPH T no. G-1100

SECTION 16: Other information

Hazard statements listed in Chapter 3

H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

CLP categories listed in Chapter 3

Aquatic Acute 1 Hazardous to the aquatic environment, acute, Category 1
Aquatic Chronic 2 Hazardous to the aquatic environment, chronic, Category 2
Aquatic Chronic 3 Hazardous to the aquatic environment, chronic, Category 3
Eye Dam. 1 Serious eye damage, Category 1
Skin Corr. 1B Skin corrosion, Category 1B
STOT SE 3 Specific target organ toxicity - single exposure, Category 3

Supplemental information

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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.