

SAFETY DATA SHEET

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

Ammonium hydroxide 25-29%

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

1.1. Product identifier

Product form : Mixture
Product name : Ammonium hydroxide 25-29%

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses

Main use category : Professional use
Use of the substance/mixture : Electronics
Chemical

Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

Sunchem AB
Box 69
S-433 21 Partille Sweden
T +46 31 447310

info@sunco.se - www.sunchem.se

Manufacturer

Sunchem AB
Box 69
S-433 21 Partille Sweden
T +46 31 447310

info@sunco.se - www.sunchem.se

1.4. Emergency telephone number

Country	Official advisory body	Address	Emergency number
United Kingdom	National Poisons Information Service (Newcastle Unit)	Claremont Place Newcastle-upon-Tyne, Newcastle	+44 191 2606182 Hours of operation: 24hrs +44 191 2606180

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin Corr. 1B H314
Eye Dam. 1 H318
STOT SE 3 H335
Aquatic Acute 1 H400

Full text of hazard classes, H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]



Hazard pictograms (CLP):

Signal word (CLP) : Danger

Contains : Ammonia solution

Hazard statements (CLP)

H314 - Causes severe skin burns and eye damage.
H335 - May cause respiratory irritation.
H400 - Very toxic to aquatic life.

Precautionary statements (CLP)

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse cautiously with water for several minutes.
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/physician.
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P271 - Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P264 - Wash hands, forearms and face thoroughly after handling.
P501 Dispose of contents/ container in accordance with national regulations.

2.3. Other hazards

Other hazards which do not result in classification : None under normal conditions.

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	Conc. (% w/w)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ammonia (Note B)	(CAS-No.) 1336-21-6 (EC-No.) 215-647-6 (EC Index-No.) 007-001-01-2 (REACH-no) 01-2119982985-14	25	Skin Corr. 1B, H314 Aquatic Acute 1, H400
Specific concentration limits:			
Name	Product identifier	Specific concentration limits	
ammonia	(CAS-No.) 1336-21-6 (EC-No.) 215-647-6 (EC Index-No.) 007-001-01-2 (REACH-no) 01-2119982985-14	(5 ≤C < 100) STOT SE 3, H335	

Note B : Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 entries with Note B have a general designation of the following type: 'nitric acid ... %'. In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis.

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation	: If experiencing respiratory symptoms: Call a POISON CENTER/doctor. Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. Call a POISON CENTER/doctor if you feel unwell.
First-aid measures after skin contact	: Wash with plenty of soap and water. Take off immediately all contaminated clothing. Chemical burns must be treated by a physician. Rinse skin with water/shower. Immediately call a POISON CENTER/doctor.
First-aid measures after eye contact	: Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Get medical attention immediately. Continue to rinse. Immediately call a POISON CENTER/doctor. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

First-aid measures after ingestion : DO NOT induce vomiting. Get medical attention immediately. Rinse nose, mouth and throat with water. Drink plenty of water. Danger of aspiration and development of chemical pneumonia. Do not give victim anything to drink if he is unconscious. Chemical burns must be treated by a physician. Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

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

Symptoms/effects after inhalation : May cause respiratory irritation.
Symptoms/effects after skin contact : Causes severe skin burns and eye damage.
Symptoms/effects after eye contact : Causes serious eye damage.
Symptoms/effects after ingestion : If ingested may cause corrosion of gastrointestinal tract.

4.3. Indication of any immediate medical attention and special

treatment needed Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media : Avoid water in straight hose stream; will scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Non flammable.
Hazardous decomposition products in case of fire : Ammonia or amines. Very corrosive gases/vapours/fumes.

5.3. Advice for firefighters

Firefighting instructions : Do not enter fire area without proper personal protective equipment, including respiratory protection (EN137). Exercise caution when fighting any chemical fire. Containers close to fire should be removed immediately or cooled with water.
Protection during firefighting : Wear self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Ensure adequate ventilation, especially in confined areas. Avoid contact with skin and eyes. Use personal protective equipment as required.

6.1.1. For non-emergency personnel

Protective equipment : Wear appropriate personal protective equipment - see Section 8.
Emergency procedures : Keep public away from danger area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Discharging into rivers and drains is forbidden. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Dispose of at a licensed waste collection centre.

Methods for cleaning up : Take up liquid spill into absorbent material. Post clean with water.
Never pour spill back in original packaging for reuse.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

See Section 8 for information on personal protection equipment. See section 13 for waste handling.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Corrosive storage.
Precautions for safe handling : Avoid spilling, skin and eye contact. Avoid inhalation of vapours. Use only outdoors or in a well-ventilated area. Ensure adequate ventilation.
NEVER pour water into this substance; when dissolving or diluting always add it slowly to the water.
Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands, forearms and face thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures Comply with applicable regulations.
Storage conditions : Keep cool. Store in a well-ventilated place. Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed.
Incompatible materials : Bases. Acids.

7.3. Specific end

use(s) No additional
data.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Eye wash facilities and emergency shower must be available when handling this product.

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:

Chemical goggles or face shield. STANDARD EN 166.

8.2.2.2. Skin protection

Skin and body

protection: Wear suitable protective clothing

Hand protection:

Wear suitable gloves. Polyvinylchloride (PVC). Nitril. Layer thickness : >0,40mm. Breakthrough time : 240 >480min. STANDARD EN 374.

8.2.2.3. Respiratory protection

Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Use respiratory equipment with gas filter, type K. STANDARD EN 149:2001 + A1:2009

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Other information:

Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the protective equipment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless.
Odour	: Ammonia.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: 36 °C
Flammability	: Not available
Explosive properties	: Product is not explosive.
Oxidising properties	: Non flammable.
Explosive limits	: Not available
Lower explosive limit (LEL)	: Not available
Upper explosive limit (UEL)	: Not available
Flash point	: Not available
Auto-ignition temperature	: Not available

Decomposition temperature	: Not available
pH	: 14
Viscosity, kinematic	: Not available
Solubility	: Very soluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: 0.53 bar
Vapour pressure at 50 °C	: Not available
Density	: 0.905 g/cm ³ @ 20 °C
Relative density	: Not available
Relative vapour density at 20 °C	: Not available
Particle size	: Not applicable
Particle size distribution	: Not applicable
Particle shape	: Not applicable
Particle aspect ratio	: Not applicable
Particle aggregation state	: Not applicable
Particle agglomeration state	: Not applicable
Particle specific surface area	: Not applicable
Particle dustiness	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No incompatible groups noted. Thermal decomposition generates : Corrosive vapours.

10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Exothermic reaction on contact with : Water. Never add water to acid/base!.

10.4. Conditions to avoid

Stable under recommended handling and storage conditions (see section 7).

10.5. Incompatible materials

Oxidizing agent. Halogens. nitromethane. Heavy metal compounds. The solution is strongly alkaline and reacts with strong acids under heat generation.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition generates : Corrosive vapours.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Additional information	: Based on available data, the classification criteria are not met

Skin corrosion/irritation	: Causes severe skin burns. pH: 14
Serious eye damage/irritation	: Causes serious eye damage. pH: 14
Respiratory or skin sensitisation	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Reproductive toxicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-single exposure	: May cause respiratory irritation.
Additional information	: Based on available data, the classification criteria are not met
STOT-repeated exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified
Additional information	: Based on available data, the classification criteria are not met

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

11.2.2 Other information

Potential adverse human health effects and symptoms

: Based on available data, the classification criteria are not met

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Very toxic to aquatic life. The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.

Hazardous to the aquatic environment, short-term (acute) : Very toxic to aquatic life.

Hazardous to the aquatic environment, long-term (chronic) : Not classified

Ammonium hydroxide 25%

LC50 - Fish [1]	15 mg/l (96 hours - Gambusia affinis - Mosquito fish)
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12.2. Persistence and degradability

Ammonium hydroxide 25%

Persistence and degradability	Componet(s) are biodegradable.
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12.3. Bioaccumulative potential

Ammonium hydroxide 25%

Bioaccumulative potential	No bioaccumulation.
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12.4. Mobility in soil

Ammonium hydroxide 25%

Ecology - soil	The product is water soluble and may spread in water systems.
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12.5. Results of PBT and vPvB assessment

Ammonium hydroxide 25%

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
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12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : Based on available data, the classification criteria are not met

12.7. Other adverse effects

Other adverse effects : None to our knowledge.






SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Dispose as hazardous waste.
Waste treatment methods	: Follow the instructions for destruction of used packing.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
Additional information	: The given LoW-code is a guiding, and the code depends on how the waste is formed. User must evaluate the choice of correct code.
European List of Waste (LoW) code	: 06 02 03* - ammonium hydroxide

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID /

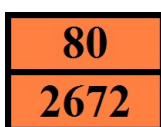
ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 2672	UN 2672	UN 2672	UN 2672	UN 2672
14.2. UN proper shipping name				
AMMONIA SOLUTION	AMMONIA SOLUTION	Ammonia solution	AMMONIA SOLUTION	AMMONIA SOLUTION
Transport document description				
UN 2672 AMMONIA SOLUTION, 8, III, (E), ENVIRONMENTALLY HAZARDOUS	UN 2672 AMMONIA SOLUTION, 8, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 2672 Ammonia solution, 8, III, ENVIRONMENTALLY HAZARDOUS	UN 2672 AMMONIA SOLUTION, 8, III, ENVIRONMENTALLY HAZARDOUS	UN 2672 AMMONIA SOLUTION, 8, III, ENVIRONMENTALLY HAZARDOUS
14.3. Transport hazard class(es)				
8	8	8	8	8
				
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				

Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR)	:C5
Special provisions (ADR)	:543
Limited quantities (ADR)	:5L
Excepted quantities (ADR)	:E1



Orange plates	:
EAC code	:2R

Transport by sea

EmS-No. (Fire)	:F-A
EmS-No. (Spillage)	:S-B

Air transport

PCA Excepted quantities (IATA)	:E1
PCA Limited quantities (IATA)	:Y841
Special provisions (IATA)	:A64, A803

Inland waterway transport

Classification code (ADN)	:C5
Special provisions (ADN)	:543
Limited quantities (ADN)	:5 L
Excepted quantities (ADN)	:E1

Rail transport

Special provisions (RID)	:543
Excepted quantities (RID)	:E1
Hazard identification number (RID)	:80

14.7. Maritime transport in bulk according to IMO instruments

IBC code	:No IBC-code for bulk transport offshore (MARPOL).
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SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions
 Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

15.1.2. National regulations

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

No chemical safety assessment has been carried out

SECTION 16: Other information

Data sources :REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Full text of H- and EUH-statements:

Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H335	May cause respiratory
irritation. H400	Very toxic to aquatic life.

The information in this safety data sheet is based on information from the manufacturer/supplier, present european and national legislation, and presupposes that the product is used within the specified area of application.