

# SAFETY DATA SHEET



according to Regulation (EC) No 1907/2006 (REACH) as amended

## Ammonium hydroxide 20-22%

Creation date 25th January 2022

Revision date Version 1.0

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

#### 1.1. Product identifier

Substance / mixture Ammonium hydroxide 20-22%  
Number substance  
SCH0170, UCH0170  
Chemical name ammonia solution  
CAS number 1336-21-6  
Index number 007-001-01-2  
EC (EINECS) number 215-647-6

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against Substance's intended use

For professional use only. Laboratory chemical substances.

##### The use descriptors

SU 24 Scientific research and development

PC 21 Laboratory chemicals

##### Substance uses advised against

The product should not be used in ways other than those referred in Section 1.

#### 1.3. Details of the supplier of the safety data sheet

##### Supplier

Name or trade name Analytika, spol. s r.o.  
Address Ke Klíčovu 816/2a, Praha 9 - Vysočany, 190 00  
Czech Republic  
Identification number (CRN) 14891883  
VAT Reg No CZ14891883  
Phone +420 286 589 616  
E-mail msds@analytika.net  
Web address www.analytika.net

##### Competent person responsible for the safety data sheet

Name Analytika, spol. s r.o.  
E-mail msds@analytika.net

#### 1.4. Emergency telephone number

European emergency number: 112

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification of the substance in accordance with Regulation (EC) No 1272/2008

The substance is classified as dangerous.

Met. Corr. 1, H290  
Skin Corr. 1, H314  
STOT SE 3, H335

Full text of all classifications and hazard statements is given in the section 16.

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### Most serious adverse physico-chemical effects

May be corrosive to metals.

### Most serious adverse effects on human health and the environment

May cause respiratory irritation. Causes severe skin burns and eye damage.

## 2.2. Label elements

### Hazard pictogram



### Signal word

Danger

### Dangerous substance

ammonia solution

(Index: 007-001-01-2; CAS: 1336-21-6)

### Hazard statements

- H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.  
H335 May cause respiratory irritation.

### Precautionary statements

- P260 Do not breathe vapours/spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
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 doctor.

## 2.3. Other hazards

Substance does not meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended.

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### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

##### Chemical characterization

The substance specified below.

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
Index: 007-001-01-2 CAS: 1336-21-6 EC: 215-647-6	<b>substance main component</b> ammonia solution	20-22	Skin Corr. 1B, H314 Aquatic Acute 1, H400 (M=1) Specific concentration limit: STOT SE 3, H335: C ≥ 5 %	1

#### Notes

- 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 all classifications and hazard statements is given in the section 16.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

Take care of your own safety. If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet. If unconscious, put the person in the stabilized (recovery) position on his side with his head slightly bent backwards and make sure that airways are free; never induce vomiting. If the person vomits by himself, make sure that the vomit is not inhaled. In life threatening conditions first of all provide resuscitation of the affected person and ensure medical assistance. Respiratory arrest - provide artificial respiration immediately. Cardiac arrest - provide indirect cardiac massage immediately.

##### If inhaled

Take care of your own safety, do not let the affected person walk! Terminate the exposure immediately; move the affected person to fresh air. Beware of the contaminated clothes. Depending on the situation, call the medical rescue service and ensure medical treatment considering the frequent need of further observation for at least 24 hours.

##### If on skin

Remove contaminated clothes. Take off any rings, watches, bracelets before or during washing if worn in the contaminated areas of the skin. Depending on the situation, call the medical rescue service and always ensure medical treatment. Rinse contaminated areas with a flow of water, lukewarm at best, for 10-30 minutes; do not use any brush, soap or neutralizers. Rinse skin with water or shower. Rinse cautiously with water for several minutes.

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### If in eyes

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. No neutralization should be performed in any case! Rinsing should be continued for 10-30 minutes from the inner to the outer eye corner to make sure that the other eye is not involved. Depending on the situation, call medical rescue service or ensure medical treatment as promptly as possible. Everyone must be referred for treatment even if affected only a little.

### If swallowed

DO NOT INDUCE VOMITING - there is danger of further damage to the gastrointestinal tract!!! RINSE THE MOUTH WITH WATER IMMEDIATELY AND LET THE PERSON DRINK 2-5 dl of cold water to reduce the heating effect of the corrosive substance. Consuming larger amounts of liquid is not advisable as it may induce vomiting and potential inhaling of the corrosive substances in the lungs. The affected person must not be forced to drink, particularly if already feeling pain in the mouth or throat. In this case let the affected person only rinse the mouth with water. DO NOT PROVIDE ACTIVATED CARBON! If the affected person vomits, make sure to prevent inhalation of the vomit (as there is a danger of lung damage after inhalation of these liquids in the airways also in infinitesimal amount). Depending on the situation, call medical rescue service or ensure medical treatment as promptly as possible.

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

### If inhaled

Inhaling vapours can cause corrosion of the breathing system. May cause respiratory irritation.

### If on skin

Causes severe skin burns.

### If in eyes

Causes serious eye damage.

### If swallowed

Corrosion of the digestion system can occur.

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

Symptomatic treatment.

### More information

Other relevant information is not available.

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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

##### Suitable extinguishing media

Alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist.

##### Unsuitable extinguishing media

Water - full jet.

#### 5.2. Special hazards arising from the substance or mixture

In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.

#### 5.3. Advice for firefighters

Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely. Use a self-contained breathing apparatus and full-body protective clothing. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

The mixture is non-flammable. May be corrosive to metals. Provide sufficient ventilation. Use personal protective equipment for work. Follow the instructions in the Sections 7 and 8. Do not inhale mist/vapours/spray. Prevent contact with skin and eyes.

#### 6.2. Environmental precautions

Prevent contamination of the soil and entering surface or ground water.

#### 6.3. Methods and material for containment and cleaning up

Spilled product should be covered with suitable (non-flammable) absorbing material (sand, diatomaceous earth, earth and other suitable absorption materials); to be contained in well closed containers and removed as per the Section 13. In the event of leakage of the substantial amount of the product, inform fire brigade and other competent bodies. After removal of the product, wash the contaminated site with plenty of water. Do not use solvents. Absorb spillage to prevent material damage.

#### 6.4. Reference to other sections

See the Section 7, 8 and 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Do not inhale mist/vapours/spray. Prevent contact with skin and eyes. Wash hands and exposed parts of the body thoroughly after handling. Use only in a well-ventilated area. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection.

#### 7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose. Do not expose to sunlight. Store locked up. Keep only in original packaging. Keep container tightly closed.

Storage class

8B - Non-combustible corrosive substances

#### 7.3. Specific end use(s)

not available

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### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

#### 8.2. Exposure controls

Follow the usual measures intended for health protection at work and especially for good ventilation. This can be achieved only by local suction or efficient general ventilation. If exposure limits cannot be observed in this mode, suitable protection of airways must be used. Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

##### Eye/face protection

Protective goggles or face shield (based on the nature of the work performed).

##### Skin protection

Hand protection: Protective gloves resistant to the product. When choosing appropriate thickness, material and permeability of the gloves, observe recommendations of their particular manufacturer. Observe other recommendations of the manufacturer. Other protection: protective workwear. Contaminated skin should be washed thoroughly.

##### Respiratory protection

Mask with a filter in a poorly ventilated environment.

##### Thermal hazard

Not available.

##### Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	liquid
Colour	colourless
Odour	data not available
Melting point/freezing point	- 60 °C
Boiling point or initial boiling point and boiling range	data not available
Flammability	data not available
Lower and upper explosion limit	
bottom	16 %
upper	27 %
Flash point	data not available
Auto-ignition temperature	data not available
Decomposition temperature	data not available
pH	11,7 (undiluted at 20 °C)
Kinematic viscosity	data not available
Solubility in water	soluble
Partition coefficient n-octanol/water (log value)	data not available
Vapour pressure	data not available
Density and/or relative density	data not available
Form	

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data not available

### 9.2. Other information

none

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The substance is non-flammable.

### 10.2. Chemical stability

The product is stable under normal conditions.

### 10.3. Possibility of hazardous reactions

Unknown.

### 10.4. Conditions to avoid

The product is stable and no degradation occurs under normal use. Protect against flames, sparks, overheating and against frost.

### 10.5. Incompatible materials

Protect against strong acids, bases and oxidizing agents. Thereby a dangerous exothermic reaction will be prevented. May be corrosive to metals.

### 10.6. Hazardous decomposition products

Not developed under normal uses. Dangerous products are formed at high temperature and in fire, such as carbon monoxide and carbon dioxide, heavy smoke and ammonia.

## SECTION 11: Toxicological information

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

No toxicological data is available for the substance.

#### Acute toxicity

Based on available data the classification criteria are not met.

#### Skin corrosion/irritation

Causes severe skin burns and eye damage.

#### Serious eye damage/irritation

Causes severe skin burns and eye damage.

#### Respiratory or skin sensitisation

Based on available data the classification criteria are not met.

#### Germ cell mutagenicity

Based on available data the classification criteria are not met.

#### Carcinogenicity

Based on available data the classification criteria are not met.

#### Reproductive toxicity

Based on available data the classification criteria are not met.

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### Toxicity for specific target organ - single exposure

May cause respiratory irritation.

### Toxicity for specific target organ - repeated exposure

Based on available data the classification criteria are not met.

### Aspiration hazard

Based on available data the classification criteria are not met.

### 11.2. Information on other hazards

not available

## SECTION 12: Ecological information

### 12.1. Toxicity

#### Acute toxicity

Based on available data the classification criteria are not met.

### 12.2. Persistence and degradability

Data not available.

### 12.3. Bioaccumulative potential

Data not available.

### 12.4. Mobility in soil

Data not available.

### 12.5. Results of PBT and vPvB assessment

Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

### 12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms as it does not meet the criteria set out in section B of Regulation (EU) No 2017/2100.

### 12.7. Other adverse effects

Data not available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Hazard of environmental contamination; dispose of the waste in accordance with the local and/or national regulations. Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling.



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### Waste management legislation

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

### Waste type code

20 01 15 Alkalines \*

### Packaging waste type code

15 01 10 packaging containing residues of or contaminated by hazardous substances \*

(\*) - Hazardous waste according to Directive 2008/98/EC on hazardous waste

## SECTION 14: Transport information

### 14.1. UN number or ID number

UN 2672

### 14.2. UN proper shipping name

AMMONIA SOLUTION

### 14.3. Transport hazard class(es)

8 Corrosive substances

### 14.4. Packing group

III - substances presenting low danger

### 14.5. Environmental hazards

not relevant

### 14.6. Special precautions for user

Reference in the Sections 4 to 8.

### 14.7. Maritime transport in bulk according to IMO instruments

not relevant

### Additional information

Hazard identification No.

80

UN number

2672

Classification code

C5

Safety signs

8



### Air transport - ICAO/IATA

Packaging instructions passenger 852

Cargo packaging instructions 856

### Marine transport - IMDG

EmS (emergency plan) F-A, S-B

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### SECTION 15: Regulatory information

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

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16th 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, as amended.

#### 15.2. Chemical safety assessment

not available

### SECTION 16: Other information

#### A list of standard risk phrases used in the safety data sheet

H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.  
H335 May cause respiratory irritation.  
H400 Very toxic to aquatic life.

#### Guidelines for safe handling used in the safety data sheet

P260 Do not breathe vapours/spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
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 doctor.

#### Other important information about human health protection

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

#### Key to abbreviations and acronyms used in the safety data sheet

ADR European agreement concerning the international carriage of dangerous goods by road  
BCF Bioconcentration Factor  
CAS Chemical Abstracts Service  
CLP Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures  
EINECS European Inventory of Existing Commercial Chemical Substances  
EmS Emergency plan

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ES	Identification code for each substance listed in EINECS
EU	European Union
EuPCS	European Product Categorisation System
IATA	International Air Transport Association
IBC	International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
INCI	International Nomenclature of Cosmetic Ingredients
ISO	International Organization for Standardization
IUPAC	International Union of Pure and Applied Chemistry
log Kow	Octanol-water partition coefficient
MARPOL	International Convention for the Prevention of Pollution from Ships
OEL	Occupational Exposure Limits
PBT	Persistent, Bioaccumulative and Toxic
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Agreement on the transport of dangerous goods by rail
UN	Four-figure identification number of the substance or article taken from the UN Model Regulations
UVCB	Substances of unknown or variable composition, complex reaction products or biological materials
VOC	Volatile organic compounds
vPvB	Very Persistent and very Bioaccumulative
Aquatic Acute	Hazardous to the aquatic environment
Met. Corr.	Corrosive to metals
Skin Corr.	Skin corrosion
STOT SE	Specific target organ toxicity - single exposure

### Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

### Recommended restrictions of use

not available

### Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

### More information

Classification procedure - calculation method.

### Statement

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The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.