

SAFETY DATA SHEET



according to Commission Regulation (EU) 2020/878 as amended

Ammonia, 25% solution

Creation date 04th November 2024
Revision date Version 5.0

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

- 1.1. Product identifier**
Ammonia, 25% solution
Substance / mixture substance
Chemical name ammonia%
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

Laboratory chemical substances. Manufacture of substances

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

Protolab Stanisław Staniuk



Address

Owocowa 4-8, Słupsk, 76-200

Poland

Phone

+48 794 341 322

E-mail

protolab@protolab.pl

Competent person responsible for the safety data sheet

Name

Protolab Stanisław Staniuk

E-mail

protolab@protolab.pl

- 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.

Skin Corr. 1B, H314

STOT SE 3, H335

Aquatic Acute 1, H400

Most serious adverse effects on human health and the environment

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

- 2.2. Label elements**

Hazard pictogram



Signal word

Danger

Dangerous substance

ammonia%

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

Hazard statements

H314

Causes severe skin burns and eye damage.

H335

May cause respiratory irritation.

H400

Very toxic to aquatic life.

SAFETY DATA SHEET



according to Commission Regulation (EU) 2020/878 as amended

Ammonia, 25% solution

Creation date 04th November 2024
Revision date Version 5.0

Precautionary statements

P102 Keep out of reach of children.
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.
P405 Store locked up.
P501 Dispose of contents/container to be handed over to the person authorized to dispose of waste or by returning to the supplier.

Requirements for child-resistant fastenings and tactile warning of danger

Container must carry a tactile warning of danger. Container must be fitted with child-resistant fastening.

2.3. Other hazards

The substance does not have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605. Substance does not meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended.

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	substance main component ammonia%	<100	Skin Corr. 1B, H314 Aquatic Acute 1, H400 (M=1) Specific concentration limit: STOT SE 3, H335: C ≥ 5 %	1

Notes

- 1 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

Terminate the exposure immediately; move the affected person to fresh air. Take care of your own safety, do not let the affected person walk! 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. Rinse contaminated areas with a flow of water, lukewarm at best, for 10-30 minutes; do not use any brush, soap or neutralizers. Depending on the situation, call the medical rescue service and always ensure medical treatment. Rinse cautiously with water for several minutes. Rinse skin with water or shower.

SAFETY DATA SHEET



according to Commission Regulation (EU) 2020/878 as amended

Ammonia, 25% solution

Creation date

04th November 2024

Revision date

Version

5.0

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

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! 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.

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

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. Do not allow to enter drains.

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.

6.4. Reference to other sections

See the Section 7, 8 and 13.

SAFETY DATA SHEET



according to Commission Regulation (EU) 2020/878 as amended

Ammonia, 25% solution

Creation date	04th November 2024	Version	5.0
Revision date			

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Prevent formation of gases and vapours in concentrations exceeding the occupational exposure limits. 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 outdoors or in a well-ventilated area. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection. Avoid release to the environment.

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. Store locked up. Keep container tightly closed.

Storage class

8B - Non-combustible corrosive substances

7.3. Specific end use(s)

not available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

none

8.2. Exposure controls

Take off contaminated clothing and wash before reuse. 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

Halfmask with a filter against organic vapours or a self-contained breathing apparatus as appropriate if exposure limit values of substances are exceeded or in a poorly ventilated environment.

Thermal hazard

Data not available.

Environmental exposure controls

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	liquid
Colour	data not available
Odour	data not available
Melting point/freezing point	-57.5 °C
Boiling point or initial boiling point and boiling range	37.7 °C
Flammability	Flammable gas.
Lower and upper explosion limit	
bottom	15.4 %
upper	33.6 %
Flash point	data not available
Auto-ignition temperature	data not available
Decomposition temperature	data not available
pH	11-12 (undiluted)
Kinematic viscosity	data not available
Solubility in water	in 20°C - soluble
Solubility in fats	data not available
Partition coefficient n-octanol/water (log value)	log Pow: -1.38

SAFETY DATA SHEET



according to Commission Regulation (EU) 2020/878 as amended

Ammonia, 25% solution

Creation date	04th November 2024	Version	5.0
Revision date			

Vapour pressure	data not available
Density and/or relative density	data not available
Relative vapour density	data not available
Particle characteristics	data not available
Form	liquid

9.2. Other information

Evaporation rate	data not available
------------------	--------------------

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

Acids.

10.6. Hazardous decomposition products

Not developed under normal uses. Dangerous outcomes such as carbon monoxide and carbon dioxide are formed at high temperature and in fire.

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. Inhalation of solvent vapors above values exceeding exposure limits for working environment may result in acute inhalation poisoning, depending on the level of concentration and exposure time.

Acute toxicity

No data available for the substance. Based on available data the classification criteria are not met.

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Ammonia, 25% solution				
Route of exposure	Result	Exposure time	Species	Source
Dermal	Highly irritating		Rabbit	(29% roztwór) (RTECS)

Serious eye damage/irritation

Causes severe skin burns and eye damage.

Ammonia, 25% solution			
Route of exposure	Result	Exposure time	Species
Eye	Highly irritating, Serious eye damage		Rabbit

Respiratory or skin sensitisation

No data available for the substance. Based on available data the classification criteria are not met.

Germ cell mutagenicity

No data available for the substance. Based on available data the classification criteria are not met.

SAFETY DATA SHEET



according to Commission Regulation (EU) 2020/878 as amended

Ammonia, 25% solution

Creation date

04th November 2024

Revision date

Version

5.0

Carcinogenicity

No data available for the substance. Based on available data the classification criteria are not met.

Reproductive toxicity

No data available for the substance. Based on available data the classification criteria are not met.

Toxicity for specific target organ - single exposure

May cause respiratory irritation.

Toxicity for specific target organ - repeated exposure

No data available for the substance. Based on available data the classification criteria are not met.

Aspiration hazard

No data available for the substance. Based on available data the classification criteria are not met.

11.2. Information on other hazards

Endocrine disrupting properties

The substance does not have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

Other information

not available

SECTION 12: Ecological information

12.1. Toxicity

Very toxic to aquatic life.

12.2. Persistence and degradability

No data available for the substance.

12.3. Bioaccumulative potential

No data available for the substance.

12.4. Mobility in soil

No data available for the substance.

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.

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.

SAFETY DATA SHEET



according to Commission Regulation (EU) 2020/878 as amended

Ammonia, 25% solution

Creation date	04th November 2024	Version	5.0
Revision date			

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

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.

UN number

Classification code

Safety signs

80

2672

C5

8+dangerous for the environment



Road transport - ADR

Special provisions

543

Limited quantities

5 L

Excepted quantities

E1

Packaging

Packing instructions

P001, IBC03, LP01, R001

Mixed packing provisions

MP19

Portable tanks and bulk containers

Guidelines

T7

Special provisions

TP1

ADR tank

Tank code

L4BN

Vehicles for tank carriage

AT

Transport category

3

Tunnel restriction code

(E)

Special provision for

packages

V12

SAFETY DATA SHEET



according to Commission Regulation (EU) 2020/878 as amended

Ammonia, 25% solution

Creation date	04th November 2024	Version	5.0
Revision date			

Railway transport - RID

Special provisions	543
Excepted quantities	E1

Packaging

Packing instructions	P001, IBC03, LP01, R001
Mixed packing provisions	MP19

Portable tanks and bulk containers

Guidelines	T7
Special provisions	TP1

RID Tanks

Tank code	L4BN
Transport category	0

Special provision for

packages	W12
----------	-----

Air transport - ICAO/IATA

Packaging instructions for limited amount	Y841
Packaging instructions passenger	852
Cargo packaging instructions	856

Marine transport - IMDG

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

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 as amended. Commission Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

15.2. Chemical safety assessment

not available

SECTION 16: Other information

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

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

P102	Keep out of reach of children.
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.
P405	Store locked up.
P501	Dispose of contents/container to by handing over to the person authorized to dispose of waste or by returning to the supplier.

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.

SAFETY DATA SHEET



according to Commission Regulation (EU) 2020/878 as amended

Ammonia, 25% solution

Creation date

04th November 2024

Revision date

Version

5.0

Key to abbreviations and acronyms used in the safety data sheet

ADR	Agreement concerning the international carriage of dangerous goods by road
Aquatic Acute	Hazardous to the aquatic environment
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures
EC	Identification code for each substance listed in EINECS
EINECS	European Inventory of Existing Commercial Chemical Substances
EmS	Emergency plan
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
IMO	International Maritime Organization
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
OEL	Occupational Exposure Limits
PBT	Persistent, bioaccumulative and toxic
PMT	Persistent, mobile and toxic
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Agreement on the transport of dangerous goods by rail
Skin Corr.	Skin corrosion
STOT SE	Specific target organ toxicity - single exposure
UN number	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
vPvM	Very persistent and very mobile

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.

The changes (which information has been added, deleted or modified)

Changes made in section 10.

More information

Classification procedure - calculation method.

Statement

SAFETY DATA SHEET



according to Commission Regulation (EU) 2020/878 as amended

Ammonia, 25% solution

Creation date	04th November 2024	Version	5.0
Revision date			

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.