

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Ammonium chloride buffer solution pH 10.0 R Reag. Ph. Eur., chapter 4.1.3

Revision date: 14.02.2022

Product code: 25059

Page 1 of 12

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

1.1. Product identifier

Ammonium chloride buffer solution pH 10.0 R Reag. Ph. Eur., chapter 4.1.3

UFI: VFD7-F23V-K009-2R1W

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

Use of the substance/mixture

Laboratory chemicals

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name:	Fa. Bernd Kraft GmbH	
Street:	Stempelstraße 6	
Place:	D-47167 Duisburg	
Telephone:	0203/5194-0	Telefax: 0203/5194-290
e-mail:	info@berndkraft.de	
Contact person:	Abteilung Produktsicherheit	Telephone: 0203/5194-107/117
e-mail:	produktsicherheit@berndkraft.de	
Internet:	www.berndkraft.de	
Responsible Department:	Abteilung Produktsicherheit	

1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

Further Information

This product is a mixture. REACH Registration Number see section 3.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Skin Irrit. 2; H315

Eye Irrit. 2; H319

STOT SE 3; H335

Aquatic Acute 1; H400

Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

2.2. Label elements

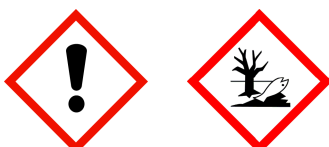
Regulation (EC) No 1272/2008

Hazard components for labelling

Ammonia

Signal word: Danger

Pictograms:



Ammonium chloride buffer solution pH 10.0 R Reag. Ph. Eur., chapter 4.1.3

Revision date: 14.02.2022

Product code: 25059

Page 2 of 12

Hazard statements

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves and eye/face protection.
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 POISON CENTER/doctor.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Mixtures in aqueous solution

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
1336-21-6	Ammonia			5 - < 10 %
	215-647-6	007-001-01-2	01-2119488876-14	
	Skin Corr. 1B, Aquatic Acute 1, Aquatic Chronic 2; H314 H400 H411			
12125-02-9	ammonium chloride			5 - < 10 %
	235-186-4	017-014-00-8	01-2119487950-27	
	Acute Tox. 4, Eye Irrit. 2; H302 H319			

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

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
1336-21-6	215-647-6	Ammonia	5 - < 10 %
		inhalation: LC50 = 4230 mg/l (vapours); oral: LD50 = 350 mg/kg STOT SE 3; H335: >= 5 - 100 M acute; H400: M=10	
12125-02-9	235-186-4	ammonium chloride	5 - < 10 %
		dermal: LD50 = > 2000 mg/kg; oral: LD50 = 1410 mg/kg	

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

No data available

Ammonium chloride buffer solution pH 10.0 R Reag. Ph. Eur., chapter 4.1.3

Revision date: 14.02.2022

Product code: 25059

Page 3 of 12

After inhalation

Provide fresh air.
Call a doctor if you feel unwell.

After contact with skin

Wash immediately with: Water
Take off immediately all contaminated clothing and wash it before reuse.
Call a physician immediately.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.
Remove contact lenses, if present and easy to do. Continue rinsing.
Protect uninjured eye.

After ingestion

Rinse mouth immediately and drink plenty of water.
Do NOT induce vomiting.
Do not allow a neutralisation agent to be drunk.
Call a physician immediately.

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

Irritant
Cough
Dyspnoea
Risk of serious damage to eyes.

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

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Non-combustible liquids
Hazardous combustion products
In case of fire may be liberated:
Nitrogen oxides (NO_x)

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.
In case of fire and/or explosion do not breathe fumes.
Avoid contact with skin, eyes and clothes.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.
Move undamaged containers from immediate hazard area if it can be done safely.
Use water spray jet to protect personnel and to cool endangered containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Provide adequate ventilation.
Use personal protection equipment.

Ammonium chloride buffer solution pH 10.0 R Reag. Ph. Eur., chapter 4.1.3

Revision date: 14.02.2022

Product code: 25059

Page 4 of 12

Avoid contact with skin, eyes and clothes.
Remove persons to safety.
Emergency procedures
Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment

Cover drains.
Prevent spread over a wide area (e.g. by containment or oil barriers).
Collect in closed and suitable containers for disposal.
Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Provide adequate ventilation.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Read label before use. Handle and open container with care.
When using do not eat, drink, smoke, sniff.
Use personal protection equipment. Use extractor hood (laboratory).
Provide adequate ventilation. Do not breathe vapour/aerosol.
Avoid contact with skin, eyes and clothes.

Advice on protection against fire and explosion

Usual measures for fire prevention.

Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs. Remove contaminated, saturated clothing immediately.
Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink. Avoid: aerosol or mist formation Do not breathe vapour/aerosol.

Further information on handling

Draw up and observe skin protection programme.
Wash hands and face before breaks and after work and take a shower if necessary.
Take off immediately all contaminated clothing and wash it before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed.

Hints on joint storage

No data available

Ammonium chloride buffer solution pH 10.0 R Reag. Ph. Eur., chapter 4.1.3

Revision date: 14.02.2022

Product code: 25059

Page 5 of 12

Further information on storage conditions

Keep away from heat.
Protect from sunlight.

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m ³	fib/cm ³	Category	Origin
7664-41-7	Ammonia, anhydrous	20	14		TWA (8 h)	
		50	36		STEL (15 min)	
12125-02-9	Ammonium chloride, fume	-	10		TWA (8 h)	
		-	20		STEL (15 min)	

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
1336-21-6	Ammonia			
Worker DNEL, long-term		inhalation	systemic	47,6 mg/m ³
Worker DNEL, acute		inhalation	systemic	47,6 mg/m ³
Worker DNEL, long-term		inhalation	local	14 mg/m ³
Worker DNEL, acute		inhalation	local	36 mg/m ³
Worker DNEL, long-term		dermal	systemic	6,8 mg/kg bw/day
Worker DNEL, acute		dermal	systemic	6,8 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	23,8 mg/m ³
Consumer DNEL, acute		inhalation	systemic	23,8 mg/m ³
Consumer DNEL, long-term		inhalation	local	2,8 mg/m ³
Consumer DNEL, acute		inhalation	local	7,2 mg/m ³
Consumer DNEL, long-term		dermal	systemic	68 mg/kg bw/day
Consumer DNEL, acute		dermal	systemic	68 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	6,8 mg/kg bw/day
Consumer DNEL, acute		oral	systemic	6,8 mg/kg bw/day
12125-02-9	ammonium chloride			
Consumer DNEL, long-term		inhalation	systemic	9,9 mg/m ³
Consumer DNEL, long-term		dermal	systemic	114 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	11,4 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	33,5 mg/m ³
Worker DNEL, long-term		dermal	systemic	190 mg/kg bw/day

Ammonium chloride buffer solution pH 10.0 R Reag. Ph. Eur., chapter 4.1.3

Revision date: 14.02.2022

Product code: 25059

Page 6 of 12

PNEC values

CAS No	Substance	Value
Environmental compartment		
1336-21-6	Ammonia	
Freshwater		0,001 mg/l
Freshwater (intermittent releases)		0,007 mg/l
Marine water		0,001 mg/l
12125-02-9	ammonium chloride	
Freshwater		1,2 mg/l
Freshwater (intermittent releases)		1,2 mg/l
Marine water		11,2 mg/l
Micro-organisms in sewage treatment plants (STP)		16,2 mg/l
Soil		0,163 mg/kg

8.2. Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Individual protection measures, such as personal protective equipment

Eye/face protection

goggles

Wear eye/face protection.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact

Trade name/designation: KCL 730 Camatril® Velours

Recommended material: NBR (Nitrile rubber) 0,4 mm

Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation: KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

Wear suitable protective clothing. Take off immediately all contaminated clothing.

Ammonium chloride buffer solution pH 10.0 R Reag. Ph. Eur., chapter 4.1.3

Revision date: 14.02.2022

Product code: 25059

Page 7 of 12

Wash hands before breaks and after work.

Respiratory protection

Respiratory protection necessary at: aerosol or mist formation

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid
 Colour: colourless
 Odour: stinging

Changes in the physical state

Melting point/freezing point: No data available
 Boiling point or initial boiling point and boiling range: No data available
 Sublimation point: No data available
 Softening point: No data available
 Pour point: No data available
 No data available:
 Flash point: No data available

Flammability

Solid/liquid: No data available
 Gas: No data available

Explosive properties

No data available

Lower explosion limits: No data available
 Upper explosion limits: No data available
 Auto-ignition temperature: No data available

Self-ignition temperature

Solid: No data available
 Gas: No data available

Decomposition temperature: No data available

pH-Value: 10

Viscosity / dynamic: No data available

Viscosity / kinematic: No data available

Flow time: No data available

Water solubility: completely miscible

Solubility in other solvents

No data available

Partition coefficient n-octanol/water: No data available

Vapour pressure: No data available
 (at 20 °C)

Vapour pressure: No data available

Density: 0,9712 g/cm³

Bulk density: No data available

Relative vapour density: No data available

Ammonium chloride buffer solution pH 10.0 R Reag. Ph. Eur., chapter 4.1.3

Revision date: 14.02.2022

Product code: 25059

Page 8 of 12

9.2. Other information

Information with regard to physical hazard classes

Sustaining combustion: No data available

Oxidizing properties

No data available

Other safety characteristics

Solvent separation test: No data available

Solvent content: 0

Solid content: 0

Evaporation rate: No data available

Further Information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

No data available

10.3. Possibility of hazardous reactions

Acid

10.4. Conditions to avoid

Heat

10.5. Incompatible materials

No data available

10.6. Hazardous decomposition products

In case of fire may be liberated:

SECTION 5: Firefighting measures

Further information

No data available

SECTION 11: Toxicological information

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

Toxicokinetics, metabolism and distribution

There are no data available on the preparation/mixture itself.

Acute toxicity

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

Ammonium chloride buffer solution pH 10.0 R Reag. Ph. Eur., chapter 4.1.3

Revision date: 14.02.2022

Product code: 25059

Page 9 of 12

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
1336-21-6	Ammonia				
	oral	LD50 mg/kg 350	Rat	Journal of Industrial Hygiene and Toxicology	OECD Guideline 401
	inhalation (1 h) vapour	LC50 4230 mg/l	Mouse	Bull. Environm. Contam. Toxicol, 1982, 2	Assessment of acute inhalation toxicity
12125-02-9	ammonium chloride				
	oral	LD50 mg/kg 1410	Rat	Other company data (1983)	other: not mentioned
	dermal	LD50 mg/kg > 2000	Rat	Study report (2010)	EU Method B.3

Irritation and corrosivity

Causes skin irritation.

Causes serious eye irritation.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

May cause respiratory irritation. (Ammonia)

STOT-repeated exposure

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

Aspiration hazard

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

Specific effects in experiment on an animal

There are no data available on the preparation/mixture itself.

Additional information on tests

There are no data available on the preparation/mixture itself.

Practical experience

There are no data available on the preparation/mixture itself.

11.2. Information on other hazards

Other information

Irritant

Cough

Dyspnoea

Risk of serious damage to eyes.

SECTION 12: Ecological information

12.1. Toxicity

There are no data available on the mixture itself.

Ammonium chloride buffer solution pH 10.0 R Reag. Ph. Eur., chapter 4.1.3

Revision date: 14.02.2022

Product code: 25059

Page 10 of 12

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
1336-21-6	Ammonia					
	Acute fish toxicity	LC50 0,75 - 3,4 mg/l	96 h	Pimephales promelas	Trans Amer Fish Soc; 112 (5). 1983. 705-	Assessment of acute toxicity in the fath
	Acute crustacea toxicity	EC50 101 mg/l	48 h	Daphnia magna	Environ. Toxicol. Chem. 5: 443-447 (1986)	other: ASTM E729-80
	Fish toxicity	NOEC 1,2 mg/l	61 d	Oncorhynchus gorbuscha	Fish. Bull. 78(3): 641-648 (1980)	OECD Guideline 210
12125-02-9	ammonium chloride					
	Acute fish toxicity	LC50 209 mg/l	96 h	Cyprinus carpio	Indian J. Environ. Health, 17, 140-146,	other: E03-05:APHA, AWWA & WPCF
	Acute crustacea toxicity	EC50 101 mg/l	48 h	Daphnia magna	Env. Tox. Chem. 5, 443-447 (1986) (1986)	other: ASTM E729-80
	Fish toxicity	NOEC mg/l 11,8	28 d	Pimephales promelas	Env.Tox. Chem. 5, 437-442 (1986) (1986)	other: - American Society for Testing an
	Algae toxicity	NOEC mg/l 26,8	10 d	Navicula sp.	Mar. Biol. 43(4), 307-315, (1977) (1977)	no data
	Crustacea toxicity	NOEC mg/l 14,6	21 d	Daphnia magna	Env. Tox. Chem. 5, 443-447 (1986) (1986)	other: not mentioned
	Acute bacteria toxicity	(EC50 mg/l) 1618	0,5 h	activated sludge, domestic	Study report (1988)	OECD Guideline 209

12.2. Persistence and degradability

There are no data available on the mixture itself.

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
1336-21-6	Ammonia	-1,38

12.4. Mobility in soil

There are no data available on the mixture itself.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

There are no data available on the mixture itself.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

Discharge into the environment must be avoided.

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

Ammonium chloride buffer solution pH 10.0 R Reag. Ph. Eur., chapter 4.1.3

Revision date: 14.02.2022

Product code: 25059

Page 11 of 12

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.
Send to a physico-chemical treatment facility under observation of official regulations.
Do not allow to enter into surface water or drains.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.
Dispose of waste according to "Kreislaufwirtschafts- und Abfallgesetz (KrW-/AbfG)".

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number or ID number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number or ID number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

14.7. Maritime transport in bulk according to IMO instruments

No dangerous good in sense of this transport regulation.

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3

Information according to 2012/18/EU (SEVESO III): E1 Hazardous to the Aquatic Environment

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Ammonium chloride buffer solution pH 10.0 R Reag. Ph. Eur., chapter 4.1.3

Revision date: 14.02.2022

Product code: 25059

Page 12 of 12

Water hazard class (D): 2 - obviously hazardous to water

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 2,4,7,8,9,11,12,15,16.

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Skin Irrit. 2; H315	
Eye Irrit. 2; H319	
STOT SE 3; H335	Calculation method
Aquatic Acute 1; H400	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
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.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)