

according to Regulation (EC) No 1907/2006

Revision date: 27.05.2024

Ammoniak- / Ammoniumchlorid - Pufferlösung Product code: 32128

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

1.1. Product identifier

Ammoniak- / Ammoniumchlorid - Pufferlösung

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:	AnalytiChem GmbH	
	ACD	
Street:	Stempelstraße 6	
Place:	D-47167 Duisburg	
Telephone:	0203/5194-0	Telefax: 0203/5194-290
E-mail:	info@analytichem.de	
Contact person:	Abteilung	Telephone: 0203/5194-107/117
	Produktsicherheit	
E-mail:	produktsicherheit@analytichem.de	
Internet:	www.analytichem.de	
Responsible	Abteilung Produktsicherheit	
Department:	·	
1.4. Emergency	For Hazardous Materials [or Dangerous G	ioods]
telephone number:	Incidents Spill, Leak, Fire, Exposure, or	
	Accident Call CHEMTREC Day or Night W	/ithin USA
	and Canada: 1-800-424-9300 Outside US	A and
	Canada: +1 703-741-5970 (collect calls ac	ccepted)

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

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008 Signal word: Warning



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Pictograms:		
Hazard statements		
H315	Causes skin irritation.	
H319	Causes serious eye irritation.	
Precautionary statemer	nts	
P280	Wear protective gloves/protective clothing/eye	
	protection/face protection/hearing protection.	
P302+P352	IF ON SKIN: Wash with plenty of water.	
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several	
	minutes. Remove contact lenses, if present and easy to	
	do. Continue rinsing.	
	- 0	
P337+P313	If eye irritation persists: Get medical	

No data available

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization Mixtures in aqueous solution

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation			
1336-21 -6	Ammonia			1 - < 5 %
	215-647-6	007-001-01-2	01-2119488876-14	
	Skin Corr. 1B, Aquatic Ac H314 H400 H411	ute 1, Aquatic Chronic 2;	·	
12125-0 2-9	ammonium chloride			1 - < 5 %
	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.



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Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Cond	. Limits, M-factors and ATE	
1336-21	215-647	Ammonia	1 - < 5
-6	-6		%
	inhalation: L0		
	350 mg/kg S	TOT SE 3; H335: >= 5 - 100	
	Aquatic Acute	1; H400: M=10	
12125-0	235-186	ammonium chloride	1 - < 5
2-9	-4		%
	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

After inhalation

Provide fresh air.

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. Call a physician immediately.

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

Irritant

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



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5.2. Special hazards arising from the substance or mixture

Hazardous combustion products In case of fire may be liberated: Nitrogen oxides (NOx)

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. Avoid contact with skin, eyes and clothes. Remove persons to safety. Emergency procedures Consult an expert 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



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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.

Provide adequate ventilation. Avoid contact with skin, eyes and clothes.

Do not breathe vapour/aerosol.

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

lake 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

Further information on storage conditions

Keep cool. Protect from sunlight.

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters



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Occupational exposure limits

CAS No	Substance	ppm	mg/m³	fib/c m³	earegery	Origin
7664-41 -7	Ammonia, anhydrous	20	14		TWA (8 h)	
		50	36		STEL (15 min)	
12125-0 2-9	Ammonium chloride, fume	-	10		TWA (8 h)	
		-	20		STEL (15 min)	



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DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure	Effect	Value
	_	route		
1336-21 -6	Ammonia			
Worker DNE	L, long-term	inhalation	systemic	47,6 mg/m³
Worker DNE	L, acute	inhalation	systemic	47,6 mg/m ³
Worker DNE	L, long-term	inhalation	local	14 mg/m ³
Worker DNE	L, acute	inhalation	local	36 mg/m ³
Worker DNE	L, long-term	dermal	systemic	6,8 mg/kg bw/day
Worker DNE	L, acute	dermal	systemic	6,8 mg/kg bw/day
Consumer D	NEL, long-term	inhalation	systemic	23,8 mg/m ³
Consumer D	NEL, acute	inhalation	systemic	23,8 mg/m ³
Consumer D	NEL, long-term	inhalation	local	2,8 mg/m ³
Consumer D	NEL, acute	inhalation	local	7,2 mg/m ³
Consumer D	NEL, long-term	dermal	systemic	68 mg/kg bw/day
Consumer D	NEL, acute	dermal	systemic	68 mg/kg bw/day
Consumer D	NEL, long-term	oral	systemic	6,8 mg/kg bw/day
Consumer D	NEL, acute	oral	systemic	6,8 mg/kg bw/day
12125-0 2-9	ammonium chloride			
Worker DNE	L, long-term	inhalation	systemic	33,5 mg/m ³
Worker DNE	L, long-term	dermal	systemic	190 mg/kg bw/day
Consumer D	NEL, long-term	inhalation	systemic	9,9 mg/m³
Consumer D	NEL, long-term	dermal	systemic	114 mg/kg bw/day
Consumer D	NEL, long-term	oral	systemic	11,4 mg/kg bw/day



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PNEC values

CAS No	Substance	
Environmental compartment Value		Value
1336-21 -6	Ammonia	
Freshwater		0,001 mg/l
Freshwater	(intermittent releases)	0,007 mg/l
Marine wate	r	0,001 mg/l
12125-0 2-9	ammonium chloride	
Freshwater		1,2 mg/l
Freshwater	(intermittent releases)	1,2 mg/l
Marine wate	r	11,2 mg/l
Micro-organ	isms 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

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 KCL 897 Butoject® Butyl caoutchouc (butyl rubber) 0,3 mm Wearing time with permanent contact: > 480 min

By short-term hand contact KCL 720 Camapren® CR (polychloroprene, chloroprene rubber) 0,65 mm Wearing time with occasional contact (splashes): > 60 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

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Safety Data Sheet

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Eichenzell, Internet: www.kc	.de).		
contaminated clothing. Wash hands before breaks a The choice of body protectio	n depends on the concentration and nces. The chemical resistance of		
The entrepeneur has to ensute testing of respiratory protection			
SECTION 9: Physical and chem	nical properties		
•			
9.1. Information on basic physical Physical state:			
Colour:	Liquid clear		
Odour:	characteristic		
Melting point/freezing point:		No data available	
Boiling point or initial boiling point and boiling		No data available	
range: Flammability:		No data available	
Lower explosion limits:		No data available No data available	
Upper explosion limits:		No data available	
		no uata avaliable	

No data available

completely miscible

9.2. Other information

Flash point:

Auto-ignition

temperature: Decomposition

temperature: pH-Value:

Viscosity / kinematic:

Solubility in other solvents No data available Partition coefficient

Water solubility:

n-octanol/water: Vapour pressure:

Vapour pressure:

Density:

density:

Bulk density:

Relative vapour



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Information with regard to phys	sical hazard classes	
Explosive properties		
No data available		
Sustaining combustion:	No data available	
Self-ignition temperature		
Solid:	No data available	
Gas:	No data available	
Oxidizing properties		
Oxidizing		
Other safety characteristics		
Evaporation rate:	No data available	
Solvent separation	No data available	
test:		
Sublimation point:	No data available	
Softening point:	No data available	
Pour point:	No data available	
No data available:		
Viscosity / dynamic:	No data available	
Flow time:	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

No data available

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

<u>1272/2008</u>

Acute toxicity

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

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l



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CAS No	No Chemical name				
	Exposure route	Dose	Species	Source	Method
1336-21 -6	Ammonia				
	oral	LD50 350 mg/kg	Rat	Journal of Industrial Hygiene and Toxico	OECD Guideline 401
	inhalation (1 h) vapour	LC50 4230 mg/l	Mouse	Bull. Environm. Contam. Toxicol, 1982, 2	Assessment of acute inhalation toxicity
12125-0 2-9	ammonium chloride				
	oral	LD50 1410 mg/kg	Rat	Other company data (1983)	other: not mentioned
	dermal	LD50 > 2000 mg/kg	Rat	Study report (2010)	EU Method B.3

Irritation and corrosivity

Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/eye irritation: Causes serious eye irritation.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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.

STOT-single exposure

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

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



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Other information

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

Further information

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

SECTION 12: Ecological information

12.1. Toxicity

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



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



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Acute bacteria toxicity	EC50 1618 mg/l()	0,5 activated h sludge, domestic	Study report (1988)	OECD Guideline 209			

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-	Ammonia	-1,38
6		

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.

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

There are no data available on the mixture itself.

Further information

Do not allow to enter into surface water or drains. Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

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.

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.



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14.2. UN proper_	No dangerous good in sense of this transport	
shipping name:	regulation.	
14.3. Transport hazard	No dangerous good in sense of this transport	
class(es):	regulation.	
14.4. Packing group:	No dangerous good in sense of this transport	
	regulation.	
Inland waterways transport (ADN)		
14.1. UN number or ID	No dangerous good in sense of this transport	
<u>number:</u>	regulation.	
14.2. UN proper	No dangerous good in sense of this transport	
<u>shipping name:</u>	regulation.	
14.3. Transport hazard	No dangerous good in sense of this transport	
<u>class(es):</u>	regulation.	
14.4. Packing group:	No dangerous good in sense of this transport	
	regulation.	
Marine transport (IMDG)	No demonstration according to the state of the terms and	
14.1. UN number or ID	No dangerous good in sense of this transport	
number:	regulation.	
14.2. UN proper	No dangerous good in sense of this transport	
shipping name:	regulation.	
14.3. Transport hazard	No dangerous good in sense of this transport	
<u>class(es):</u>	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	No dangerous good in sense of this transport	
<u>number:</u>	regulation.	
<u>14.2. UN proper</u>	No dangerous good in sense of this transport	
<u>shipping name:</u>	regulation.	
14.3. Transport hazard	No dangerous good in sense of this transport	
<u>class(es):</u>	regulation.	
14.4. Packing group:	No dangerous good in sense of this transport regulation.	
14.5. Environmental hazarda		
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 accor		
No dangerous good in sense of		
SECTION 15: Regulatory informat	ion	
15.1. Safety, health and environmenta	I regulations/legislation specific	
for the substance or mixture		

Restrictions on use (REACH, annex XVII):

Entry 3

National regulatory information



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Employment	Observe restrictions to employment for	
restrictions:	juveniles according to the 'juvenile work	
	protection guideline' (94/33/EC).	
Water hazard class (D):	1 - slightly hazardous to water	

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 12.

Abbreviations and acronyms

Acute Tox: Acute toxicity Skin Corr: Skin corrosion Skin Irrit: Skin irritation Eye Irrit: Eye irritation Aquatic Acute: Acute aquatic hazard Aquatic Chronic: Chronic aquatic hazard

Classification for mixtures and used evaluation method according to

Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	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.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Further Information

Provide appropriate information, instructions and training to users 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 relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)