

## Safety Data Sheet

according to UK REACH Regulation

### Reagent 130+R3491

Revision date: 24.01.2023

Product code: 130+R3491

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

### 1.1. Product identifier

Reagent 130+R3491

UFI: MH0F-8RWY-330S-UN1D

### 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	
Street:	Stempelstraße 6	
Place:	D-47167 Duisburg	
Telephone:	0203/5194-0	Telefax: 0203/5194-290
e-mail:	info@analytichem.de	
Contact person:	Abteilung Produktsicherheit	Telephone: 0203/5194-107/117
e-mail:	produktsicherheit@analytichem.de	
Internet:	www.analytichem.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

inapplicable, this product is a mixture REACH registration number see section 3

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### GB CLP Regulation

Skin Corr. 1B; H314  
Eye Dam. 1; H318  
STOT SE 3; H335  
Aquatic Acute 1; H400  
Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

### 2.2. Label elements

#### GB CLP Regulation

#### Hazard components for labelling

Ammonia

Signal word: Danger

#### Pictograms:



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**Hazard statements**

H314 Causes severe skin burns and eye damage.  
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.  
P273 Avoid release to the environment.  
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 (GB CLP Regulation)			
1336-21-6	Ammonia			10 - < 15 %
	215-647-6	007-001-01-2	01-2119488876-14	
	Skin Corr. 1B, Aquatic Acute 1, Aquatic Chronic 2; H314 H400 H411			

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	10 - < 15 %
	inhalation: LC50 = 4230 mg/l (vapours); oral: LD50 = 350 mg/kg STOT SE 3; H335: >= 5 - 100 Aquatic Acute 1; H400: M=10		

**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**

Self-protection of the first aider  
Avoid contact with skin, eyes and clothes.  
Take off immediately all contaminated clothing.

**After inhalation**

Provide fresh air.  
Call a physician immediately.

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#### 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  
Corrosion  
Cough  
Dyspnoea  
Gastrointestinal complaints  
gastric perforation  
Unconsciousness  
Vomiting  
Circulatory collapse  
Spasms  
Pulmonary oedema  
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  
Formation of explosive mixtures with: Air  
Hazardous combustion products  
In case of fire may be liberated:  
Nitrogen oxides (NO<sub>x</sub>)

#### 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

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#### **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
- 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.
- Formation of explosive mixtures with: Air

##### **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.

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

**Requirements for storage rooms and vessels**

- Keep container tightly closed.
- Corrosive to metals.
- Unsuitable container/equipment material: Metal

**Hints on joint storage**

- national regulations

**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**

**Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
7664-41-7	Ammonia, anhydrous	25	18		TWA (8 h)	WEL
		35	25		STEL (15 min)	WEL

**DNEL/DMEL values**

CAS No	Substance	Exposure route	Effect	Value
1336-21-6	Ammonia			
	Worker DNEL, long-term	inhalation	systemic	47,6 mg/m <sup>3</sup>
	Worker DNEL, acute	inhalation	systemic	47,6 mg/m <sup>3</sup>
	Worker DNEL, long-term	inhalation	local	14 mg/m <sup>3</sup>
	Worker DNEL, acute	inhalation	local	36 mg/m <sup>3</sup>
	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 <sup>3</sup>
	Consumer DNEL, acute	inhalation	systemic	23,8 mg/m <sup>3</sup>
	Consumer DNEL, long-term	inhalation	local	2,8 mg/m <sup>3</sup>
	Consumer DNEL, acute	inhalation	local	7,2 mg/m <sup>3</sup>
	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

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**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

**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**

Suitable examples are gloves of KCL GmbH, D-36124 Eichenzell, e-mail: [vertrieb@kcl.de](mailto:vertrieb@kcl.de) with the following specification (test according to EN 374):

By long-term hand contact

Recommended glove articles: KCL 741 Dermatril® L

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

Wearing time with permanent contact: > 480 min

By short-term hand contact

Recommended glove articles: KCL 741 Dermatril® L

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

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](http://www.kcl.de)).

**Skin protection**

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

Wash hands before breaks and after work.

**Respiratory protection**

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Filtering device with filter or ventilator filtering device of type: K

**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
Odour threshold:	No data available

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Melting point/freezing point:	No data available
Boiling point or initial boiling point and boiling range:	No data available
Flammability:	No data available
Lower explosion limits:	No data available
Upper explosion limits:	No data available
Flash point:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
pH-Value (at 20 °C):	alkaline
Viscosity / kinematic:	No data available
Water solubility:	completely miscible
Solubility in other solvents	No data available
Partition coefficient n-octanol/water:	No data available
Vapour pressure: (at 20 °C)	No data available
Vapour pressure:	No data available
Density:	0,953 g/cm <sup>3</sup>
Bulk density:	No data available
Relative vapour density:	No data available

**9.2. Other information**

**Information with regard to physical hazard classes**

Explosive properties	No data available
Sustaining combustion:	No data available
Self-ignition temperature	No data available
Solid:	No data available
Gas:	No data available
Oxidizing properties	No data available

**Other safety characteristics**

Evaporation rate:	No data available
Solvent separation test:	No data available
Solvent content:	0
Solid content:	0
Sublimation point:	No data available
Softening point:	No data available
Pour point:	No data available
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**

Formation of explosive mixtures with: Air

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**10.3. Possibility of hazardous reactions**

Oxidising agent, mercury (Hg), Oxygen, Hydrogen peroxide, Acid, Chlorine, Heavy metals, Nitric acid, Bromine, Hydrogen bromide (HBr), Hydrochloric gas, Nitrogen oxides (NOx), Hydrogen fluoride, Carbon dioxide,

**10.4. Conditions to avoid**

Heat

**10.5. Incompatible materials**

Metal

**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 GB CLP Regulation**

**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.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
1336-21-6	Ammonia				
	oral	LD50 350 mg/kg	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

**Irritation and corrosivity**

Causes severe skin burns and eye damage.  
Causes serious eye damage.

**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.



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**11.2. Information on other hazards**

**Other information**

- Irritant
- Corrosion
- Cough
- Dyspnoea
- Gastrointestinal complaints
- gastric perforation
- Unconsciousness
- Vomiting
- Circulatory collapse
- Spasms
- Pulmonary oedema
- Risk of serious damage to eyes.

**Further information**

Mucous membrane irritation in the mouth, throat, esophagus and gastrointestinal tract.

**SECTION 12: Ecological information**

**12.1. Toxicity**

There are no data available on the mixture itself.

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

**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 UK REACH.

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.
- Discharge into the environment must be avoided.
- Forms corrosive mixtures with water even if diluted.

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#### Further information

Do not allow to enter into surface water or drains.

### 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.

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)

<b>14.1. UN number or ID number:</b>	UN 2672
<b>14.2. UN proper shipping name:</b>	Ammonia solution
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	III
Hazard label:	8
Classification code:	C5
Special Provisions:	543
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	3
Hazard No:	80
Tunnel restriction code:	E

#### Inland waterways transport (ADN)

<b>14.1. UN number or ID number:</b>	UN 2672
<b>14.2. UN proper shipping name:</b>	Ammonia solution
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	III
Hazard label:	8
Classification code:	C5
Special Provisions:	543
Limited quantity:	5 L
Excepted quantity:	E1

#### Marine transport (IMDG)

<b>14.1. UN number or ID number:</b>	UN 2672
<b>14.2. UN proper shipping name:</b>	Ammonia solution
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	III
Hazard label:	8
Marine pollutant:	P
Special Provisions:	-
Limited quantity:	5 L
Excepted quantity:	E1
EmS:	F-A, S-B

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<b>14.1. UN number or ID number:</b>	UN 2672
<b>14.2. UN proper shipping name:</b>	Ammonia solution
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	III
Hazard label:	8
Special Provisions:	A64 A803
Limited quantity Passenger:	1 L
Passenger LQ:	Y841
Excepted quantity:	E1
IATA-packing instructions - Passenger:	852
IATA-max. quantity - Passenger:	5 L
IATA-packing instructions - Cargo:	856
IATA-max. quantity - Cargo:	60 L

#### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS:	Yes
Danger releasing substance:	Ammonia

### 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).

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): 1,9.

#### Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Skin Corr. 1B; H314	Calculation method
Eye Dam. 1; H318	Calculation method
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)

H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
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

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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.

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