

**Hydrazine sulfate a.r.**

Revision: 07.03.2025

Product code: AC14.00908

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Hydrazine sulfate a.r.

Substance name: hydrazinium(2+) sulphate  
CAS No: 10034-93-2  
EC No: 233-110-4

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

Reagents and laboratory chemicals  
Only for laboratory and analysis purposes.

**Uses advised against**

Do not use for private purposes (household).

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

Company name: AnalytiChem Services, Unipessoal, Lda  
Street: Rua de Júlio Dinis 676 7º  
Place: N-4050-320 Porto  
Telephone: +351 226002917  
E-mail: info@analytichem.com  
Contact person: SDS service department  
E-mail: SDS@analytichem.com  
Internet: www.analytichem.com  
Responsible Department: SDS service department

**Supplier or manufacturer details**

Company name: AnalytiChem Belgium NV  
Street: Industriezone "De Arend" 2  
Place: B-8210 Zedelgem  
Telephone: +32 50 28 83 20  
E-mail: info.be@analytichem.com  
Contact person: SDS service department  
E-mail: SDS@analytichem.com  
Responsible Department: AnalytiChem:  
EU-Belgium: AnalytiChem Belgium, Industriezone "De Arend" 2, 8210 Zedelgem, Belgium, +32 50 28 83 20  
EU-Germany: AnalytiChem Germany, Stempelstrasse 6, 47167 Duisburg, Germany, +49 203 51 94 – 200  
EU-Netherlands: AnalytiChem Netherlands, Communicatieweg 7, 3641 SG Mijdrecht, The Netherlands, +31 297 286848  
UK: AnalytiChem UK, Unit 7 Launton Business Center, Murdock Road, Bicester, OX26 4XB, England, +44 1869 355 500  
USA: AnalytiChem USA, 227 China Road, Winslow, Maine, 04901, United States, +1 800-244-8378  
Canada: AnalytiChem Canada, 21800 Clark Graham Avenue, Baie d'Urfe, H9X 4B6, Canada, +1 514-457-0701  
Australia: ORE Research & Exploration Pty Ltd, 37A Hosie Street, Bayswater North, 3153, Australia, +61 3 9729 0333  
+44 20 3807 3798 (CHEMTREC)

**1.4. Emergency telephone number:**

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**Further Information**

A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Carc. 1B; H350  
Acute Tox. 3; H331  
Acute Tox. 3; H311  
Acute Tox. 3; H301  
Skin Sens. 1; H317  
Aquatic Acute 1; H400  
Aquatic Chronic 1; H410

Full text of hazard statements: see SECTION 16.

**2.2. Label elements****Regulation (EC) No 1272/2008**

**Signal word:** Danger

**Pictograms:**

**Hazard statements**

H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.  
H317 May cause an allergic skin reaction.  
H350 May cause cancer.  
H410 Very toxic to aquatic life with long lasting effects.

**Precautionary statements**

P201 Obtain special instructions before use.  
P273 Avoid release to the environment.  
P302+P352 IF ON SKIN: Wash with plenty of water and soap.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P308+P311 IF exposed or concerned: Call a POISON CENTER/doctor.

**Special labelling**

Restricted to professional users.

**2.3. Other hazards**

No data available

**SECTION 3: Composition/information on ingredients****3.1. Substances**

Sum formula: N<sub>2</sub>H<sub>6</sub>SO<sub>4</sub>  
Molecular weight: 130,11 g/mol

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## Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
10034-93-2	hydrazinium(2+) sulphate			100 %
	233-110-4	007-014-00-6		
	Carc. 1B, Acute Tox. 3, Acute Tox. 3, Acute Tox. 3, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1; H350 H331 H311 H301 H317 H400 H410			

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	
10034-93-2	233-110-4	hydrazinium(2+) sulphate	100 %
		inhalation: ATE = 3 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); dermal: ATE = 300 mg/kg; oral: ATE = 100 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

First aider: Pay attention to self-protection!

## After inhalation

Provide fresh air.

If breathing is irregular or stopped, administer artificial respiration.

Call a physician immediately.

## 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

After eye contact: Rinse immediately carefully and thoroughly with eye-bath or water.

Remove contact lenses, if present and easy to do. Continue rinsing.

Consult an ophthalmologist.

## After ingestion

Rinse mouth immediately and drink plenty of water.

Water, to which activated charcoal may be added

Call a physician immediately.

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

Irritant

corrosive

Allergic reactions

Cough

Dyspnoea

Vomiting

Gastrointestinal complaints

Agitation

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Spasms

Vapours may cause drowsiness and dizziness.

**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 solids

Hazardous combustion products

In case of fire may be liberated:

Nitrogen oxides (NO<sub>x</sub>)

Sulphur oxides

Decomposition with: Danger of explosion

**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.

Wear full chemical protective clothing.

In case of fire and/or explosion do not breathe fumes.

**Additional information**

Use water spray jet to protect personnel and to cool endangered containers.

Move undamaged containers from immediate hazard area if it can be done safely.

Suppress gases/vapours/mists with water spray jet.

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

**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.

Take up carefully when dry. Take up dust-free and set down dust-free.

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**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**

Avoid exposure - obtain special instructions before use.

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

Read label before use. Handle and open container with care.

When using do not eat, drink, smoke, sniff. Keep container tightly closed.

Use personal protection equipment. Use extractor hood (laboratory).

Do not breathe dust. Avoid dust formation.

Provide adequate ventilation.

**Advice on protection against fire and explosion**

Usual measures for fire prevention.

**Advice on general occupational hygiene**

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.

The choice of body protection depends on the concentration and quantity of hazardous substances. The chemical resistance of protective agents must be clarified with their suppliers.

**Further information on handling**

Take off immediately all contaminated clothing and wash it before reuse.

Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. If handled uncovered, arrangements with local exhaust ventilation have to be used.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep container tightly closed.

Keep locked up.

Store in a place accessible by authorized persons only.

Provide adequate ventilation as well as local exhaustion at critical locations.

**Hints on joint storage**

Take national regulations into account.

**Further information on storage conditions**

Store in a well-ventilated place.

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

Laboratory chemicals

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****8.2. Exposure controls**

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**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.

Do not breathe gas/fumes/vapour/spray.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

goggles

**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.

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

Trade name/designation: KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 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](http://www.kcl.de)).

**Skin protection**

Protective clothing

Take off immediately all contaminated clothing and wash it before reuse.

Wash hands and face before breaks and after work and take a shower if necessary.

Draw up and observe skin protection programme.

**Respiratory protection**

Respiratory protection necessary at: dust formation

Filtering device with filter or ventilator filtering device of type: P3

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

**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: solid

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Colour:	white
Odour:	odourless
Odour threshold:	No data available
Melting point/freezing point:	254 °C
Boiling point or initial boiling point and boiling range:	No data available
Flammability:	not applicable
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:	>250 °C
pH-Value (at 20 °C):	1,5 (50 g/l)
Viscosity / kinematic:	not determined
Water solubility: (at 20 °C)	30 g/l
Solubility in other solvents not determined	
Dissolution rate:	No data available
Partition coefficient n-octanol/water:	log Pow: -4,05
Dispersion stability:	No data available
Vapour pressure:	No data available
Vapour pressure:	No data available
Density:	1,37 g/cm <sup>3</sup>
Relative density:	No data available
Bulk density:	450 kg/m <sup>3</sup>
Relative vapour density:	not determined
Particle characteristics:	No data available

**9.2. Other information****Information with regard to physical hazard classes**

Explosive properties	
No data available	
Sustained combustibility:	No data available
Self-ignition temperature	
Solid:	not applicable
Gas:	not applicable
Oxidizing properties	
No data available	

**Other safety characteristics**

Evaporation rate:	not determined
Solvent separation test:	not determined
Solvent content:	No data available
Solid content:	100%
Sublimation point:	No data available
Softening point:	No data available
Pour point:	No data available
No data available:	
Flow time:	not determined

**Further Information**

No data available

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**SECTION 10: Stability and reactivity****10.1. Reactivity**

Reducing agent, strong

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

sulphuric acid  
Oxidising agent  
Alkali (lye)  
mercury and its compounds

**10.4. Conditions to avoid**

Heat

**10.5. Incompatible materials**

No data available

**10.6. Hazardous decomposition products**

SECTION 5: Firefighting measures

**Further information**

No data available

**SECTION 11: Toxicological information****11.1. Information on hazard classes****Toxicokinetics, metabolism and distribution**

Avoid exposure - obtain special instructions before use.

**Acute toxicity**

Toxic if inhaled.  
Toxic in contact with skin.  
Toxic if swallowed.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
10034-93-2	hydrazinium(2+) sulphate				
	oral	ATE 100 mg/kg			
	dermal	ATE 300 mg/kg			
	inhalation vapour	ATE 3 mg/l			
	inhalation dust/mist	ATE 0,5 mg/l			

**Irritation and corrosivity**

Skin corrosion/irritation: Based on available data, the classification criteria are not met.  
Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

**Sensitising effects**

May cause an allergic skin reaction. (hydrazinium(2+) sulphate)

**Carcinogenic/mutagenic/toxic effects for reproduction**

May cause cancer. (hydrazinium(2+) sulphate)  
Germ cell mutagenicity: Based on available data, the classification criteria are not met.  
Reproductive toxicity: Based on available data, the classification criteria are not met.



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**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.

**Information on likely routes of exposure**

No data available

**Specific effects in experiment on an animal**

No data available

**Additional information on tests**

No data available

**Practical experience**

No data available

**11.2. Information on other hazards****Endocrine disrupting properties**

No data available

**Other information**

Irritant  
corrosive  
Allergic reactions  
Cough  
Dyspnoea  
Vomiting  
Gastrointestinal complaints  
Agitation  
Spasms  
Vapours may cause drowsiness and dizziness.

**Further information**

May cause damage to organs.  
(kidneys, heart, liver)  
Other dangerous properties can not be excluded.

**SECTION 12: Ecological information****12.1. Toxicity**

Very toxic to aquatic life.  
Very toxic to aquatic life with long lasting effects.

**12.2. Persistence and degradability**

No data available

**12.3. Bioaccumulative potential**

log Pow: -4,05  
No indication of bioaccumulation potential.

**12.4. Mobility in soil**

No data available

**12.5. Results of PBT and vPvB assessment**

This substance does not meet the PBT/vPvB criteria of UK REACH.

**12.6. Endocrine disrupting properties**

This substance does not have endocrine disrupting properties with respect to non-target organisms.

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**12.7. Other adverse effects**

No data available

**Further information**

Do not allow to enter into surface water or drains.

Avoid release to the environment.

**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**

This material and its container must be disposed of as hazardous waste.

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.

**SECTION 14: Transport information****Land transport (ADR/RID)**

<b>14.1. UN number or ID number:</b>	UN 3288
<b>14.2. UN proper shipping name:</b>	TOXIC SOLID, INORGANIC, N.O.S. (hydrazinium(2+) sulphate)
<b>14.3. Transport hazard class(es):</b>	6.1
<b>14.4. Packing group:</b>	III
Hazard label:	6.1
Classification code:	T5
Special Provisions:	274
Limited quantity:	5 kg
Excepted quantity:	E1
Transport category:	2
Hazard No:	60
Tunnel restriction code:	E

**Inland waterways transport (ADN)**

<b>14.1. UN number or ID number:</b>	UN 3288
<b>14.2. UN proper shipping name:</b>	TOXIC SOLID, INORGANIC, N.O.S. (hydrazinium(2+) sulphate)
<b>14.3. Transport hazard class(es):</b>	6.1
<b>14.4. Packing group:</b>	III
Hazard label:	6.1
Classification code:	T5
Special Provisions:	274 802
Limited quantity:	5 kg
Excepted quantity:	E1

**Marine transport (IMDG)**

<b>14.1. UN number or ID number:</b>	UN 3288
<b>14.2. UN proper shipping name:</b>	TOXIC SOLID, INORGANIC, N.O.S. (hydrazinium(2+) sulphate)
<b>14.3. Transport hazard class(es):</b>	6.1
<b>14.4. Packing group:</b>	III
Hazard label:	6.1
Special Provisions:	223, 274
Limited quantity:	5 kg

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Excepted quantity: E1  
EmS: F-A, S-A

**Air transport (ICAO-TI/IATA-DGR)**

**14.1. UN number or ID number:** UN 3288  
**14.2. UN proper shipping name:** TOXIC SOLID, INORGANIC, N.O.S. (hydrazinium(2+) sulphate)  
**14.3. Transport hazard class(es):** 6.1  
**14.4. Packing group:** III  
Hazard label: 6.1  
Special Provisions: A3 A5  
Limited quantity Passenger: 10 kg  
Passenger LQ: Y645  
Excepted quantity: E1  
IATA-packing instructions - Passenger: 670  
IATA-max. quantity - Passenger: 100 kg  
IATA-packing instructions - Cargo: 677  
IATA-max. quantity - Cargo: 200 kg

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: Yes  
Danger releasing substance: hydrazinium(2+) sulphate

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

not applicable

**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 75  
Information according to Directive 2012/18/EU (SEVESO III): H2 ACUTE TOXIC  
Additional information: E1

**National regulatory information**

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.  
Water hazard class (D): 3 - highly hazardous to water  
Skin resorption/Sensitization: Permeates easily through outer skin and causes poisoning.

**15.2. Chemical safety assessment**

For this substance a chemical safety assessment has not been carried out.

**SECTION 16: Other information**

**Changes**

This data sheet contains changes from the previous version in section(s): 9.

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**Abbreviations and acronyms**

Acute Tox. 3: Acute toxicity, hazard category 3

Skin Sens. 1: Skin sensitisation, hazard category 1

Carc. 1A: Carcinogenicity, hazard category 1A

Carc. 1B: Carcinogenicity, hazard category 1B

Aquatic Acute 1: Hazardous to the aquatic environment, hazard category: Acute 1

Aquatic Chronic 1: Hazardous to the aquatic environment, long-term hazard category: Chronic 1

ADR: Accord européen sur le transport des marchandises dangereuses par Route  
(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

**Relevant H and EUH statements (number and full text)**

H301 Toxic if swallowed.

H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.

H311 Toxic in contact with skin.

H317 May cause an allergic skin reaction.

H331 Toxic if inhaled.

H350 May cause cancer.

H400 Very toxic to aquatic life.

H410 Very 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.