

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 13.11.2023

Version number 6 (replaces version 5)

Revision: 13.11.2023

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

· **1.1 Product identifier**

· **Product name: R31 SULPHAMIC ACID**

· **Catalog number: NR31**

· **CAS No.:**

5329-14-6

· **Registration number** 01-2119846728-XXXX

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

· **Application of the substance / the preparation:** Reagent for water analysis

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

· **Supplier:**

Tintometer GmbH
Schleefstraße 8-12
44287 Dortmund
Made in Germany
www.lovibond.com

phone: +49 (0)231 94510-0
e-mail: sales@lovibond.com

The Tintometer Limited
Lovibond® House
Sun Rise Way
Amesbury
Wiltshire SP4 7GR
United Kingdom
Tintometer GmbH
Lovibond® Water Testing
Schleefstraße 8-12
D 44287 Dortmund
Deutschland
Made in Germany
www.lovibond.com

phone : +44 1980 664800
e-mail: SDS@lovibond.uk

phone: +49(0)231 945100
e-mail: verkauf@tintometer.de / sales@tintometer.de

· **Informing department:**

e-mail: sds@lovibond.com

Product Safety Department

e-mail: sds@tintometer.de

· **Contact for technical details:** e-mail: technik@tintometer.de

· **1.4 Emergency telephone number:**

+44 1235 239670

Languages: English

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the GB CLP regulation.

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- **Hazard pictograms**



GHS07

- **Signal word** Warning

- **Hazard statements**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H412 Harmful to aquatic life with long lasting effects.

- **Precautionary statements**

P280 Wear protective gloves / eye protection.

P273 Avoid release to the environment.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P302+P352 IF ON SKIN: Wash with plenty of water.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

- **2.3 Other hazards** No further relevant information available.

- **Results of PBT and vPvB assessment**

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

- **Determination of endocrine-disrupting properties**

The product does not contain substances with endocrine disrupting properties.

SECTION 3: Composition/information on ingredients

- **3.1 Substances**

- **CAS No. Designation:**

CAS: 5329-14-6 sulfamic acid

- **Identification number(s):**

· **EC No:** 226-218-8· **Index No:** 016-026-00-0

SECTION 4: First aid measures

- **4.1 Description of first aid measures**

- **General information** Instantly remove any clothing soiled by the product.

- **After inhalation** Supply fresh air.

- **After skin contact**

Instantly rinse with water.

If skin irritation continues, consult a doctor.

- **After eye contact**

Rinse opened eye for several minutes (at least 15 min) under running water.

Call a doctor immediately.

- **After swallowing**

Rinse out mouth and then drink 1-2 glasses of water.

Seek medical treatment.

Do not induce vomiting.

- **4.2 Most important symptoms and effects, both acute and delayed:**

Irritation and corrosion

after inhalation:

mucosal irritations, cough, shortness of breath

damage to the affected mucous membranes possible

after swallowing:

coughing

breathing difficulty

sickness

vomiting

pain

cramps

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gastric or intestinal trouble

· **Danger** Danger of pulmonary oedema.· **4.3 Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**· **Suitable extinguishing agents** Use fire fighting measures that suit the environment.· **5.2 Special hazards arising from the substance or mixture**

The product is not combustible.

Formation of toxic gases is possible during heating or in case of fire.

Can be released in case of fire:

nitrous gases

Nitrogen oxides (NO_x)Sulphur oxides (SO_x)· **5.3 Advice for firefighters**· **Protective equipment:**

Wear self-contained breathing apparatus.

Wear full protective suit.

· **Additional information**

Collect contaminated fire fighting water separately. It must not enter drains.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

Ambient fire may liberate hazardous vapours.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**· **Advice for non-emergency personnel:**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Avoid causing dust.

· **Advice for emergency responders:** Protective equipment: see section 8· **6.2 Environmental precautions:**

Do not allow product to reach sewage system or water bodies.

Inform respective authorities in case product reaches water or sewage system.

· **6.3 Methods and material for containment and cleaning up:**

Ensure adequate ventilation.

Collect mechanically.

Dispose of contaminated material as waste according to item 13.

· **6.4 Reference to other sections**

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**· **Advice on safe handling:**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Prevent formation of dust.

· **Hygiene measures:**

Avoid contact with the skin.

Avoid contact with the eyes.

Take off immediately all contaminated clothing.

Wash hands during breaks and at the end of the work.

Do not eat, drink or smoke when using this product.

· **7.2 Conditions for safe storage, including any incompatibilities**· **Requirements to be met by storerooms and containers:** Store in cool location.· **Information about storage in one common storage facility:**

Do not store together with alkalis (caustic solutions).

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- Store away from water.
 - **Further information about storage conditions:**
 - Protect from heat and direct sunlight.
 - Protect from the effects of light.
 - Store under dry conditions.
 - Protect from humidity and keep away from water.
 - **Recommended storage temperature:** 20°C +/- 5°C
 - **7.3 Specific end use(s)** No further relevant information available.
-

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
 - **Components with limit values that require monitoring at the workplace:** Not required.
 - **Recommended monitoring procedures:**
 - Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.
 - **Additional information:** The lists that were valid during the compilation were used as basis.
 - **8.2 Exposure controls**
 - **Engineering measures:**
 - Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See item 7.
 - **Individual protection measures, such as personal protective equipment**
 - Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.
 - **Eye/face protection**
 - Safety glasses
 - Use safety glasses that have been tested and approved in accordance with government standards such as EN 166.
 - **Hand protection**
 - Protective gloves.
 - Preventive skin protection by use of skin-protecting agents is recommended.
 - After use of gloves apply skin-cleaning agents and skin cosmetics.
 - **Material of gloves**
 - nitrile rubber, NBR
 - Recommended thickness of the material: ≥ 0.11 mm
 - **Penetration time of glove material**
 - Value for the permeation: Level = 1 (< 10 min)
 - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
 - **Other skin protection (body protection):** Protective work clothing.
 - **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.
 - **Recommended filter device for short term use:** Combination filter B-P2
 - **Environmental exposure controls** Do not allow product to reach sewage system or water bodies.
-

SECTION 9: Physical and chemical properties

- | 9.1 Information on basic physical and chemical properties | |
|---|----------------------------------|
| · Physical state | Solid. |
| · Form: | Powder |
| · Colour: | White |
| · Odour: | Odourless |
| · Odour threshold: | Not applicable. |
| · Melting point/Freezing point: | > 190°C |
| · Boiling point or initial boiling point and boiling range | Not applicable.
Decomposition |
| · Flammability | Product is not inflammable. |
| · Explosive properties: | Product is not explosive. |
| · Lower and upper explosion limit | |
| Lower: | Not applicable. |
| Upper: | Not applicable. |
| · Flash point: | Not applicable. |

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· Auto-ignition temperature:	Not applicable (solid).
· Decomposition temperature:	> 209°C
· pH (10 g/l) at 25°C	1.2
· Kinematic viscosity	Not applicable (solid).
· Solubility	
· Water at 20°C:	213 g/l Soluble
· Partition coefficient n-octanol/water (log value)	Not applicable.
· Vapour pressure at 20°C:	0.0078 hPa
· Density and/or relative density	
· Density at 20°C:	2.1 g/cm ³
· Relative density:	Not determined.
· Relative gas density	Not applicable (solid).
· Particle characteristics	Not determined.
· 9.2 Other information	
· Information with regard to physical hazard classes	
· Corrosive to metals	Void
· Other safety characteristics	
· Oxidising properties:	none
· Additional information	
· Solids content:	100 %
· Molecular formula	H3NO3S

SECTION 10: Stability and reactivity

- **10.1 Reactivity** see section 10.3
- **10.2 Chemical stability** Stable at ambient temperature (room temperature).
- **10.3 Possibility of hazardous reactions**
 Reacts with water.
 Aqueous solution reacts acidic.
 Forms hydrogen in aqueous solution with metals
 Aqueous solution reacts with metals.
 Hydrogen is formed in the presence of aluminum or zinc.
 Reacts with acids, alkalis and oxidizing agents
 Reacts with halogenated compounds
 Violent reactions possible with:
 nitrates
 chlorine
- **10.4 Conditions to avoid** Strong heating (decomposition)
- **10.5 Incompatible materials:** metals
- **10.6 Hazardous decomposition products:** see section 5

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· LD/LC50 values that are relevant for classification:		
CAS: 5329-14-6 sulfamic acid		
Oral	LD50	3160 mg/kg (rat) (GESTIS)

- **Skin corrosion/irritation** Causes skin irritation.
- **Serious eye damage/irritation** Causes serious eye irritation.

· Information on components:		
CAS: 5329-14-6 sulfamic acid		
Irritation of skin	OECD 404	(rabbit: irritation)
Irritation of eyes	OECD 405	(rabbit: irritation)

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- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **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.

- **Information on components:**

OECD 414: Teratogenicity testing
 OECD 473: Mutagenicity testing
 OECD 471, 474, 476, 487: Germ cell mutagenicity testing

CAS: 5329-14-6 sulfamic acid	
OECD 471	(negative) (Bacterial Reverse Mutation Test - Ames test) (Salmonella typhimurium)
OECD 476	(negative) (In Vitro Mammalian Cell Gene Mutation Test)
OECD 474	(negative) (mouse, oral)
OECD 487	(negative) (In Vitro Mammalian Cell Micronucleus Test)

- **STOT (specific target organ toxicity) -single exposure** Based on available data, the classification criteria are not met.
- **STOT (specific target organ toxicity) -repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

- **Additional toxicological information:**

CAS: 5329-14-6 sulfamic acid	
.	(source: GESTIS) Main toxic effects Acute: Irritative through to corrosive effects to the mucous membranes and skin; insufficient information available on systemic effects Chronic: No information available

- **11.2 Information on other hazards**
- **Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.
- **Other information**
Other dangerous properties can not be excluded.
According to the information available to us, the chemical, physical and toxicological properties of the substances mentioned in Chapter 3 have not been thoroughly investigated.

SECTION 12: Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:**

CAS: 5329-14-6 sulfamic acid	
EC50	71.6 mg/l/48h (Daphnia magna) (OECD 202)
EC50	14.2 mg/l/96h (fish) (GESTIS)
LC50	70.3 mg/l/96h (fathhead minnow) (OECD 203) (Merck)

- **Bacterial toxicity:**

CAS: 5329-14-6 sulfamic acid	
EC10	≥1000 mg/l (Pseudomonas putida) (16h) (IUCLID)

- **12.2 Persistence and degradability** No further relevant information available.

- **Other information:**

Does not cause biological oxygen deficit.
 Methods for the determination of biodegradability are not applicable to inorganic substances.

- **12.3 Bioaccumulative potential**

log Pow < 1 = Does not accumulate in organisms.

CAS: 5329-14-6 sulfamic acid	
log Pow	0.1 (.) (experimental) (Merck)

- **12.4 Mobility in soil** No further relevant information available.

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12.5 Results of PBT and vPvB assessment

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

12.6 Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties.

12.7 Other adverse effects

Harmful effect due to pH shift.

Avoid transfer into the environment.

Water hazard:

Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralised.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Hand over to disposers of hazardous waste.

European waste catalogue

16 05 07* discarded inorganic chemicals consisting of or containing hazardous substances

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

Recommended cleaning agent: Water, if necessary with cleaning agent.

SECTION 14: Transport information

14.1 UN number or ID number
ADR, IMDG, IATA

UN2967

14.2 UN proper shipping name
ADR

2967 SULPHAMIC ACID

IMDG, IATA

SULPHAMIC ACID

14.3 Transport hazard class(es)
ADR

Class

8 (C2) Corrosive substances.

Label

8

IMDG, IATA

Class

8 Corrosive substances.

Label

8

14.4 Packing group
ADR, IMDG, IATA

III

14.5 Environmental hazards:
Marine pollutant:

No

Special marking (ADR):

Symbol (fish and tree)

14.6 Special precautions for user

Warning: Corrosive substances.

Kemler Number:

80

EMS Number:

F-A,S-B

Stowage Category

A

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· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	
· ADR	
· Excepted quantities (EQ):	E1
· Limited quantities (LQ)	5 kg
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· Transport category	3
· Tunnel restriction code	E
· IMDG	
· Limited quantities (LQ)	5 kg
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g

* SECTION 15: Regulatory information

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

· **Poisons Act UK**

· **Regulated explosives precursors**

Substance is not listed.

· **Regulated poisons**

Substance is not listed.

· **Reportable explosives precursors**

Substance is not listed.

· **Reportable poisons**

Substance is not listed.

· **Regulation (EU) 2019/1148 on the marketing and use of explosives precursors** not regulated

· **Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (PIC)**

Substance is not listed.

· **Regulation (EC) No 1334/2000 setting up a Community regime for the control of exports of dual-use items and technology:**

Substance is not listed.

· **Regulation (EC) No 273/2004 on drug precursors**

Substance is not listed.

· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

Substance is not listed.

· **Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:**

Substance is not listed.

· **REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)**

Substance is not listed.

· **LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)**

Substance is not listed.

· **Substances of very high concern (SVHC) according to REACH, Article 57**

This product does not contain any substances of very high concern above the legal concentration limit of $\geq 0.1\%$ (w / w).

· **Substances of very high concern (SVHC) according to UK REACH**

This product does not contain any substances of very high concern above the legal concentration limit of $\geq 0.1\%$ (w / w).

· **Directive 2012/18/EU (SEVESO III):**

· **Named dangerous substances - ANNEX I** Substance is not listed.

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- **Information about limitation of use:** Not required.
 - **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.
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* SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

This Safety Data Sheet is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

- **Training hints** Provide adequate information, instruction and training for operators.
- **Abbreviations and acronyms:**
 - EC50: effective concentration, 50 percent (in vivo)
 - OECD: Organisation for Economic Co-operation and Development
 - STOT: specific target organ toxicity
 - SE: single exposure
 - RE: repeated exposure
 - EC50: half maximal effective concentration
 - IC50: half maximal inhibitory concentration
 - NOEL or NOEC: No Observed Effect Level or Concentration
 - ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
 - RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 - IMDG: International Maritime Code for Dangerous Goods
 - IATA: International Air Transport Association
 - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 - EINECS: European Inventory of Existing Commercial Chemical Substances
 - CAS: Chemical Abstracts Service (division of the American Chemical Society)
 - LC50: Lethal concentration, 50 percent
 - LD50: Lethal dose, 50 percent
 - PBT: Persistent, Bioaccumulative and Toxic
 - SVHC: Substances of Very High Concern
 - vPvB: very Persistent and very Bioaccumulative
 - Skin Irrit. 2: Skin corrosion/irritation – Category 2
 - Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
 - Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

- **Sources**
 - Data arise from safety data sheets, reference works and literature.
 - ECHA: European Chemicals Agency <http://echa.europa.eu>
 - IUCLID (International Uniform Chemical Information Database)
 - GESTIS- Stoffdatenbank (Substance Database, Germany)

- *** Data compared to the previous version altered.**
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