

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

Printing date 14.11.2023

Version number 22 (replaces version 21)

Revision: 14.11.2023

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

· **1.1 Product identifier**

· **Product name:** Vario Total Nitrogen Reagent A

· **Catalog number:** 00530389, 530380, 4530380

· **CAS No.:**  
7681-57-4

· **Registration number** 01-2119531326-45-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

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

· **Informing department:**  
e-mail: sds@lovibond.com  
Product Safety Department

· **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**



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

· **2.2 Label elements**

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

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

(Contd. on page 2)

— GB —

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 14.11.2023

Version number 22 (replaces version 21)

Revision: 14.11.2023

---

**Product name: Vario Total Nitrogen Reagent A**


---

(Contd. of page 1)

**Hazard pictograms**


GHS05 GHS07

**Signal word** Danger

**Hazard-determining components of labelling:**

disodium disulphite

**Hazard statements**

H302 Harmful if swallowed.

H318 Causes serious eye damage.

**Precautionary statements**

P280 Wear protective gloves/protective clothing/eye protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

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 doctor.

**Additional information:**

EUH031 Contact with acids liberates toxic gas.

**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** inorganic salt

**CAS No. Designation:**

CAS: 7681-57-4 disodium disulphite

**Identification number(s):**
**EC No:** 231-673-0

**Index No:** 016-063-00-2

---

### 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.

**Information for doctor** Sulphites are strong sensitizers.

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

allergic reactions

irritations

after inhalation:

mucosal irritations, cough, shortness of breath

after swallowing:

absorption

gastric or intestinal trouble

(Contd. on page 3)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 14.11.2023

Version number 22 (replaces version 21)

Revision: 14.11.2023

---

**Product name: Vario Total Nitrogen Reagent A**


---

(Contd. of page 2)

---

**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.
  - **For safety reasons unsuitable extinguishing agents**  
For this substance / mixture no limitations of extinguishing agents are given.
  - **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:  
Sulphur oxides (SOx)  
Sodium oxide
  - **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.  
Suppress (knock down) gases/vapours/mists with a water spray jet.  
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.  
Avoid substance contact.  
Ensure adequate ventilation  
Avoid breathing 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.
  - **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 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:**  
Prevent formation of dust.  
Provide suction extractors if dust is formed.
- **Hygiene measures:**  
Avoid contact with the eyes.  
Avoid contact with the skin.  
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 acids.
- **Further information about storage conditions:**  
Keep container tightly sealed.  
Protect from heat and direct sunlight.  
Protect from the effects of light.

(Contd. on page 4)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 14.11.2023

Version number 22 (replaces version 21)

Revision: 14.11.2023

**Product name: Vario Total Nitrogen Reagent A**

(Contd. of page 3)

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:**

<b>CAS: 7681-57-4 disodium disulphite</b>
---

WEL (Great Britain) Long-term value: 5 mg/m <sup>3</sup>
--

- **Regulatory information** WEL (Great Britain): EH40/2020

- **DNELs**

Derived No Effect Level (DNEL)

<b>CAS: 7681-57-4 disodium disulphite</b>
---

Inhalative	DNEL 10 mg/m <sup>3</sup> (Worker / long-term /systemic effects) (MERCK)
------------	---

- **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.

- **PNECs**

Predicted No Effect Concentration (PNEC)

<b>CAS: 7681-57-4 disodium disulphite</b>
---

PNEC	75.4 mg/l (Sewage treatment plant)
------	------------------------------------

	0.1 mg/l (Marine water)
--	-------------------------

	1 mg/l (Fresh water)
--	----------------------

- **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**

Tightly sealed 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**

Breakthrough time: &gt; 480 min

The exact break trough 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:** Filter P2

- **Environmental exposure controls** Do not allow product to reach sewage system or water bodies.

GB  
(Contd. on page 5)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 14.11.2023

Version number 22 (replaces version 21)

Revision: 14.11.2023

**Product name: Vario Total Nitrogen Reagent A**

(Contd. of page 4)

### SECTION 9: Physical and chemical properties

<b>· 9.1 Information on basic physical and chemical properties</b>	
· <b>Physical state</b>	Solid.
· <b>Form:</b>	Powder
· <b>Colour:</b>	Colourless
· <b>Odour:</b>	Acrid
· <b>Odour threshold:</b>	Not determined.
· <b>Melting point/Freezing point:</b>	150°C
· <b>Boiling point or initial boiling point and boiling range</b>	Not applicable. Decomposition
· <b>Flammability</b>	The product is not combustible.
· <b>Explosive properties:</b>	Product is not explosive.
· <b>Lower and upper explosion limit</b>	
Lower:	Not applicable.
Upper:	Not applicable.
· <b>Flash point:</b>	Not applicable.
· <b>Auto-ignition temperature:</b>	Not applicable (solid).
· <b>Decomposition temperature:</b>	> 150°C
· <b>pH (50 g/l) at 20°C</b>	4.5
· <b>Kinematic viscosity</b>	Not applicable (solid).
· <b>Solubility</b>	
· <b>Water at 20°C:</b>	650 g/l Readily soluble
· <b>Partition coefficient n-octanol/water (log value)</b>	Not applicable.
· <b>Vapour pressure:</b>	Not applicable (solid).
· <b>Density and/or relative density</b>	
· <b>Density at 20°C:</b>	2.36 g/cm <sup>3</sup>
· <b>Relative density:</b>	Not determined.
· <b>Relative gas density</b>	Not applicable (solid).
· <b>Particle characteristics</b>	Not determined.

#### · 9.2 Other information

<b>· Information with regard to physical hazard classes</b>	
· <b>Corrosive to metals</b>	Void
· <b>Other safety characteristics</b>	
· <b>Oxidising properties:</b>	none
<b>· Additional information</b>	
· <b>Solids content:</b>	100 %
· <b>Molecular formula</b>	Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub>

### 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**  
Contact with acids releases toxic gases  
Reacts with acids releasing sulphur dioxide  
Exothermic reaction with:  
Oxidant, nitrites, nitrates, sulfides
- **10.4 Conditions to avoid** Strong heating (decomposition)
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**  
Sulphur dioxide  
In case of fire: see section 5.

### SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Harmful if swallowed.

(Contd. on page 6)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 14.11.2023

Version number 22 (replaces version 21)

Revision: 14.11.2023

**Product name: Vario Total Nitrogen Reagent A**

(Contd. of page 5)

· <b>LD/LC50 values that are relevant for classification:</b>		
<b>CAS: 7681-57-4 disodium disulphite</b>		
Oral	LD50	1540 mg/kg (rat) (OECD 401) (MERCK)
Dermal	LD50	>2000 mg/kg (rat) (RTECS)
Inhalative	LC50	>5.5 mg/l /4h (rat) (OECD 403) Registrant, ECHA: the value is given in analogy to sodium sulphite

· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

· **Serious eye damage/irritation**

Causes serious eye damage.

Risk of corneal clouding.

· <b>Information on components:</b>		
<b>CAS: 7681-57-4 disodium disulphite</b>		
Irritation of skin	OECD 404	(rabbit: no irritation)
Irritation of eyes	OECD 405	(rabbit: severe irritations)

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

· <b>Information on components:</b>		
<b>CAS: 7681-57-4 disodium disulphite</b>		
Sensitisation	OECD 406	(guinea pig: negative)
	OECD 429	(negative) Local lymph node assay (LLNA) - Mouse Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

· **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:**

CAS 7681-57-4: Did not show carcinogenic effects in animal experiments (IUCLID).

CAS 7681-57-4: No impairment of reproductive performance in animal experiments (IUCLID).

OECD 414: Teratogenicity testing

OECD 473: Mutagenicity testing

OECD 471, 474, 476, 487: Germ cell mutagenicity testing

<b>CAS: 7681-57-4 disodium disulphite</b>	
OECD 471	(negative) (Bacterial Reverse Mutation Test - Ames 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.

· **Information on likely routes of exposure**

When working with sodium metabisulfite, inhalative and dermal exposures are to be expected. [GESTIS]

· <b>Additional toxicological information:</b>	
<b>CAS: 7681-57-4 disodium disulphite</b>	
· (source: GESTIS)	
Main toxic effects:	
Acute: Irritant effect on the eyes and respiratory tract, acute intolerance reactions (in case of disposition)	
chronic: allergic skin diseases (rare)	
Further information (Merck):	
Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.	
Persons with allergies and/or asthma may exhibit hypersensitivity to sulfites.	

· **11.2 Information on other hazards**

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

(Contd. on page 7)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 14.11.2023

Version number 22 (replaces version 21)

Revision: 14.11.2023

**Product name: Vario Total Nitrogen Reagent A**

(Contd. of page 6)

**Other information**

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: 7681-57-4 disodium disulphite**

EC50	89 mg/l/48h (Daphnia magna) (OECD 202) (MERCK)
IC50	48 mg/l/72h (Desmodesmus subspicatus) (OECD 201) (MERCK)
LC50	150–220 mg/l/96h (rainbow trout) (DIN 38412 Teil 15) (Merck)

**Bacterial toxicity:**
**CAS: 7681-57-4 disodium disulphite**

EC50	56 mg/l (Pseudomonas putida) (17h) (IUCLID)
------	--

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

**Other information:** Methods for the determination of biodegradability are not applicable to inorganic substances.

**12.3 Bioaccumulative potential** No further relevant information available.

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

**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** 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** Void

**14.2 UN proper shipping name**

**ADR, IMDG, IATA** Void

**14.3 Transport hazard class(es)**

**ADR, IMDG, IATA**  
**Class** Void

**14.4 Packing group**

**ADR, IMDG, IATA** Void

(Contd. on page 8)

GB

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 14.11.2023

Version number 22 (replaces version 21)

Revision: 14.11.2023

**Product name: Vario Total Nitrogen Reagent A**

(Contd. of page 7)

· <b>14.5 Environmental hazards:</b>	Not applicable.
· <b>14.6 Special precautions for user</b>	Not applicable.
· <b>14.7 Maritime transport in bulk according to IMO instruments</b>	Not applicable.
· <b>Transport/Additional information:</b>	Not dangerous according to the above specifications.

### \* 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.

 · **Information about limitation of use:** Not required.

 · **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### \* 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.

(Contd. on page 9)



# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 14.11.2023

Version number 22 (replaces version 21)

Revision: 14.11.2023

---

**Product name: Vario Total Nitrogen Reagent A**

---

(Contd. of page 8)

· **Training hints** Provide adequate information, instruction and training for operators.

· **Abbreviations and acronyms:**

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)

DNEL: Derived No-Effect Level (UK REACH)

PNEC: Predicted No-Effect Concentration (UK REACH)

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

Acute Tox. 4: Acute toxicity – Category 4

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

· **Sources**

Data arise from safety data sheets, reference works and literature.

IUCLID (International Uniform Chemical Information Database)

RTECS (Registry of Toxic Effects of Chemical Substances )

· **\* Data compared to the previous version altered.**

---

GB