

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

Printing date 18.07.2018

Version number 20

Revision: 17.07.2018

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: +49 231 94510-0
e-mail: sales@tintometer.de

Tintometer GmbH
Division AQUALYTIC®
Schleefstr. 12
44287 Dortmund
Made in Germany
www.aqualytic.de

phone: +49 231 94510-755
e-mail: sales@aqualytic.de

The Tintometer Limited
Lovibond® House
Sun Rise Way
Amesbury
Wiltshire SP4 7GR
United Kingdom

phone : +44 1980 664800
e-mail: SDS@tintometer.com

Informing department:

e-mail: sds@tintometer.de
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 CLP regulation.

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· 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.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· 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.

SECTION 3: Composition/information on ingredients

· 3.1 Substances inorganic salt

· CAS No. Designation:

7681-57-4 disodium disulphite

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

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.

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

allergic reactions

after inhalation:

coughing

mucous membrane irritation

breathing difficulty

after swallowing:

irritations

absorption

gastric or intestinal trouble

· Information for doctor Sulphites are strong sensitizers.

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- **4.3 Indication of any immediate medical attention and special treatment needed:** No further relevant information available.
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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.
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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 inhalation of 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.
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SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
- **Advice on safe handling:**
Prevent formation of dust.
Thorough dedusting.
- **Hygiene measures:**
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**
- **Storage**
- **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.

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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)** See exposure scenario in the Annex to this MSDS.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**

- **Components with limit values that require monitoring at the workplace:**

CAS: 7681-57-4 disodium disulphite	
WEL (Great Britain)	Long-term value: 5 mg/m ³

- **Regulatory information** WEL (Great Britain): EH40/2011

- **DNELs**

Derived No Effect Level (DNEL)

CAS: 7681-57-4 disodium disulphite	
Inhalative	DNEL 10 mg/m ³ (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)

CAS: 7681-57-4 disodium disulphite	
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.

- **Personal protective equipment**

- **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.

- **Protection of hands:**

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: > 480 min

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:** Tightly sealed safety glasses.

- **Body protection:** Protective work clothing.

- **Limitation and supervision of exposure into the environment:** 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**

- **Appearance:**

Form / Physical state:	Powder
Colour:	Colourless

- **Odour:** Light

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· Odour threshold:	Not determined.
· pH-value (50 g/l) at 20°C:	3.5-5
· Melting point/Freezing point:	150°C Decomposition
· Initial boiling point and boiling range:	Not applicable Decomposition
· Flash point:	Not applicable
· Flammability (solid, gas):	The product is not combustible.
· Ignition temperature:	Not applicable
· Decomposition temperature:	> 150°C
· Auto-ignition temperature:	Product is not self-igniting.
· Explosive properties:	Product is not explosive.
· Flammability or explosive limits:	
Lower:	Not applicable
Upper:	Not applicable
· Oxidising properties:	none
· Vapour pressure:	Not determined.
· Density at 20°C:	2.36 g/cm ³
· Relative density:	Not determined.
· Vapour density:	Not determined.
· Evaporation rate:	Not determined.
· Solubility(ies):	
Water at 20°C:	650 g/l Readily soluble
· Partition coefficient: n-octanol/water:	Not applicable.
· Viscosity:	Not applicable.
· Organic solvents:	0.0 %
· Solids content:	100.0 %
· 9.2 Other information	No further relevant information available.

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 toxicological effects**
- **Acute toxicity**
Harmful if swallowed.

· **Acute toxicity estimate (ATE_(MX)) - Calculation method:**

Oral	CLP ATE _(MX)	1540 mg/kg (.)
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· LD/LC50 values that are relevant for classification:		
CAS: 7681-57-4 disodium disulphite		
Oral	LD50	1540 mg/kg (rat) (OECD 401) (MERCK)
Dermal	LD50	>2000 mg/kg (rat) (RTECS)

- **Primary irritant effect:**
- **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.

· Information on components:		
CAS: 7681-57-4 disodium disulphite		
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.

· Information on components:		
CAS: 7681-57-4 disodium disulphite		
Sensitisation	OECD 406	(guinea pig: negative)

- **CMR effects (carcinogenicity, mutagenicity and toxicity 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 (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 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).
CAS 7681-57-4: Did not show teratogenic effects in animal experiments.
OECD 414: Teratogenicity testing
OECD 473: Mutagenicity testing
OECD 471, 474, 476, 487: Germ cell mutagenicity testing

CAS: 7681-57-4 disodium disulphite		
OECD 471	(negative)	(Bacterial Reverse Mutation Test - Ames test)

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.

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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 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
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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

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

14.5 Environmental hazards:

Not applicable.

14.6 Special precautions for user

Not applicable.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

Transport/Additional information:

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

Substance is not listed.

Directive 2012/18/EU (SEVESO III):
Named dangerous substances - ANNEX I Substance is not listed.

Regulation (EU) No 649/2012

Substance is not listed.

Information about limitation of use: Employment restrictions concerning young persons must be observed.

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.

· **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 européen sur le transport 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 (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

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)