

Safety Data Sheet acc. to ISO/DIS 11014

Printing date 03/13/2014

Reviewed on 03/13/2014

* 1 Identification

- **Product identifier**
- **Trade name:** Vario Total Nitrogen Reagent A
- **Catalogue number:** 00530389, 530380, 4530380
- **CAS Number:** 7681-57-4
- **EC number:** 231-673-0
- **Index number:** 016-063-00-2
- **Relevant identified uses of the substance or mixture and uses advised against:** No further relevant information available.
- **Application of the substance / the mixture:** Reagent for water analysis
- **Manufacturer/Supplier:**
Tintometer Inc.
6456 Parkland Drive
Sarasota, FL 34243
USA
phone: (941) 756-6410
fax: (941) 727-9654
www.lovibond.us
Made in Germany
- **Emergency telephone number:** Chemtrec® : (US & Canada) 800-424-9300 (International) +1 (703) 527-3887

* 2 Hazard(s) identification

- **Classification of the substance or mixture**

US-GHS



GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Xn; Harmful

R22: Harmful if swallowed.



Xi; Irritant

R41: Risk of serious damage to eyes.

R31: Contact with acids liberates toxic gas.

- **Label elements**

- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms** GHS05, GHS07

- **Signal word** Danger

- **Hazard-determining components of labeling:**

disodium disulphite

- **Hazard statements**

H302 Harmful if swallowed.

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H318 Causes serious eye damage.

- **Precautionary statements**

- P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P264 Wash thoroughly after handling.
 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 POISON CENTER/doctor.
 P330 Rinse mouth.

- **Canadian Hazard Symbols:**



- **WHMIS classification:**

- D2A
Very toxic material causing other toxic effects
 D2B
Toxic material causing other toxic effects

- **NFPA ratings (scale 0 - 4)**



Health = 3
 Fire = 0
 Reactivity = 0

* 3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**
7681-57-4 disodium disulphite
- **Identification number(s)**
- **EC number:** 231-673-0
- **Index number:** 016-063-00-2

- **REACH - pre-registered substances**

| | |
|-----------|---------------------|
| 7681-57-4 | disodium disulphite |
|-----------|---------------------|

* 4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
- **After eye contact:**
Rinse opened eye for several minutes (15 min) under running water.
Call a doctor immediately.
- **After swallowing:**
Drink copious amounts of water, induce vomiting.
Immediately call a doctor.
- **Most important symptoms and effects, both acute and delayed**
after swallowing:
irritations
allergic reactions
profuse sweating
CNS disorders
depressions
vomiting
after inhalation:
coughing

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mucous membrane irritation
breathing difficulty

- **Information for doctor:** Sulfites are strong sensitizers

- **Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

* 5 Fire-fighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.

- **Special hazards arising from the substance or mixture**

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

Sulfur oxides (SO_x)

Sodium oxide

- **Advice for firefighters**

- **Protective equipment:**

Wear fully protective suit.

Wear self-contained respiratory protective device.

- **Additional information**

Collect contaminated fire fighting water separately. It must not enter the sewage system.

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

* 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

Avoid formation of dust.

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

- **Environmental precautions:** Do not allow product to reach sewage system or any water course.

- **Methods and material for containment and cleaning up:**

Dispose contaminated material as waste according to item 13.

Pick up mechanically.

Ensure adequate ventilation.

- **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 disposal information.

* 7 Handling and storage

- **Precautions for safe handling** Thorough dedusting.

- **Information about protection against explosions and fires:** The product is not flammable.

- **Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:** Store in a cool location.

- **Information about storage in one common storage facility:**

Do not store together with acids.

Store away from oxidizing agents.

- **Further information about storage conditions:**

Protect from heat and direct sunlight.

Store in dry conditions.

Protect from humidity and water.

Protect from exposure to the light.

- **Recommended storage temperature:** 20 °C +/- 5 °C (approx. 68°F)

- **Storage class:** 13

- **Specific end use(s)** No further relevant information available.

* 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

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- **Control parameters**

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

7681-57-4 disodium disulphite (90-100%)

| | |
|-------------|--------------------------------------|
| REL (USA) | Long-term value: 5 mg/m ³ |
| TLV (USA) | Long-term value: 5 mg/m ³ |
| EL (Canada) | Long-term value: 5 mg/m ³ |
| EV (Canada) | Long-term value: 5 mg/m ³ |

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.

- **Breathing equipment:** Use respiratory protective device against the effects of fumes/dust/aerosol.

- **Recommended filter device for short term use:** Filter P2

- **Protection of hands:** 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.

- **Eye protection:** Tightly sealed goggles

- **Body protection:** Protective work clothing

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

| | |
|---|---|
| · Odor Threshold: | Not applicable. |
| · Appearance: | |
| Form: | Powder |
| Color: | Colorless |
| · Odor: | Pungent |
| · pH-value (50 g/l) at 20 °C (68 °F): | 4.5 |
| · Melting point/Melting range: | 150 °C (302 °F) |
| · Boiling point/Boiling range: | Not applicable. |
| · Freezing Point: | Not applicable. |
| · Flash point: | Not applicable. |
| · Flammability (solid, gaseous): | Product is not flammable. |
| · Ignition temperature: | Undetermined. |
| · Danger of explosion: | Product does not present an explosion hazard. |
| · Specific Gravity: | Not applicable. |
| · Density at 20 °C (68 °F): | 1.48 g/cm ³ (12.351 lbs/gal) |
| · Bulk density at 20 °C (68 °F): | 1100-1200 kg/m ³ |
| · Vapour density | Not applicable. |
| · Evaporation rate | Not applicable. |
| · Solubility in / Miscibility with | |
| Water at 20 °C (68 °F): | 650 g/l |
| · Coefficient of Water / Oil Distribution: | Not applicable. |
| · Organic solvents: | 0.0 % |
| · Solids content: | 100.0 % |

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| | |
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| · Other information | No further relevant information available. |
|----------------------------|--|

* 10 Stability and reactivity

- **Reactivity**
- **Thermal decomposition / conditions to be avoided:** strong heating
- **Possibility of hazardous reactions** Contact with acids releases toxic gases.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:**
 - acids
 - oxidizing agents
- **Hazardous decomposition products:**
 - Carbon monoxide and carbon dioxide
 - Nitrogen oxides (NO_x)
 - Sulfur oxides (SO_x)
 - see chapter 5

* 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

| |
|---|
| · LD/LC50 values that are relevant for classification: |
|---|

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| 7681-57-4 disodium disulphite | | |
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| | | |
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| Oral | LD50 | 1540 mg/kg (rat) (MERCK) |
| Dermal | LD50 | > 2000 mg/kg (rat) (RTECS) |

- **Primary irritant effect:**
 - **on the skin:** Irritant to skin and mucous membranes.
 - **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** Sensitizing effect by inhalation and skin contact is possible by prolonged exposure.

- **Additional toxicological information:**

- **Carcinogenic categories**

| |
|---|
| · IARC (International Agency for Research on Cancer) |
|---|

| |
|--------------------------|
| Substance is not listed. |
|--------------------------|

| |
|--|
| · NTP (National Toxicology Program) |
|--|

| |
|--------------------------|
| Substance is not listed. |
|--------------------------|

| | | | |
|---------------------------|-------------|-------------------------|------------------------|
| · Carcinogenicity: | NTP? | IARC Monographs? | OSHA Regulated? |
|---------------------------|-------------|-------------------------|------------------------|

Disodium disulphite:

A4 (not classifiable for humans or animals) by ACGIH

3 (not classifiable for humans) by IARC

- **Teratogenicity:** Not found.

- **Mutagenicity:** Disodium disulphite has shown positive results in screening tests for mutagenicity. (IUCLID)

- **Reproductive Toxicity:** Not found.

- **Synergistic Products:** None

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):** no further data available

* 12 Ecological information

- **Toxicity**

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|----------------------------|
| · Aquatic toxicity: |
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| 7681-57-4 disodium disulphite | |
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| EC50 | 89 mg/l/48h (Daphnia magna) (MERCK) |
|------|--|

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| | |
|------|---|
| LC50 | 150-220 mg/l/96h (Oncorhynchus mykiss) (MERCK) |
|------|---|

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

- **Other information:**

Methods for the determination of biodegradability are not applicable to inorganic substances.

Does not cause biological oxygen deficit.

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

- **Behavior in environmental systems:**

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

- **Ecotoxicological effects:**

- **Algae toxicity:**

7681-57-4 disodium disulphite

| | |
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| IC50 | 48 mg/l/72h (Desmodesmus subspicatus) (MERCK) |
|------|--|

- **Bacterial toxicity:**

7681-57-4 disodium disulphite

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

- **Additional ecological information:**

- **CSB-value:**

7681-57-4 disodium disulphite

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| COD | 0.165 g/g (.) (MERCK) |
|-----|--------------------------|

- **General notes:**

Water hazard class 1 (Assessment by list): slightly hazardous for water

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

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

- **Results of PBT and vPvB assessment** no further data available

- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**

- **Recommendation:**

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

Hand over to hazardous waste disposers.

- **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

*14 Transport information

| | | |
|---|---------------------------|------|
| <ul style="list-style-type: none"> • UN-Number | DOT, ADR, ADN, IMDG, IATA | none |
| <ul style="list-style-type: none"> • UN proper shipping name | DOT, ADR, ADN, IMDG | none |
| <ul style="list-style-type: none"> • DOT, ADR, ADN, IMDG | IATA | none |
| <ul style="list-style-type: none"> • IATA | | none |
| <ul style="list-style-type: none"> • Transport hazard class(es) | DOT, ADR, ADN, IMDG, IATA | none |
| <ul style="list-style-type: none"> • DOT, ADR, ADN, IMDG, IATA | Class | none |
| <ul style="list-style-type: none"> • Class | | none |
| <ul style="list-style-type: none"> • Packing group | DOT, ADR, IMDG, IATA | none |
| <ul style="list-style-type: none"> • DOT, ADR, IMDG, IATA | | none |

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| | |
|---|--|
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · Transport/Additional information: | Not dangerous according to the above specifications. |
| · Canadian TDG Class: | none |

*15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

| | |
|--|--------------------------|
| · Section 355 (Extremely hazardous substances): | Substance is not listed. |
| · Section 313 (Specific toxic chemical listings): | Substance is not listed. |
| · TSCA (Toxic Substances Control Act): | Substance is listed. |
| · Proposition 65 | |
| · Chemicals known to cause cancer: | Substance is not listed. |
| · Chemicals known to cause reproductive toxicity for females: | Substance is not listed. |
| · Chemicals known to cause reproductive toxicity for males: | Substance is not listed. |
| · Chemicals known to cause developmental toxicity: | Substance is not listed. |
| · Canadian Ingredient Disclosure List | |
| · Limit 0,1% | Substance is not listed. |
| · Limit 1% | Substance is listed. |
| · Canadian Domestic Substances List (DSL) | Substance is listed. |
| · Canadian Non-domestic Substance List | Substance is not listed. |
| · EPA (Environmental Protection Agency) | Substance is not listed. |
| · NIOSH-Ca (National Institute for Occupational Safety and Health) | Substance is not listed. |
| · OSHA-Ca (Occupational Safety & Health Administration) | Substance is not listed. |
| · Australian Inventory of Chemical Substances | Substance is listed. |
| · European EINECS | Substance is listed. |
| · Standard for the Uniform Scheduling of Drugs and Poisons | |
| 7681-57-4 disodium disulphite | S5 |

- Information about limitation of use:
Employment restrictions concerning pregnant and lactating women must be observed.

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Employment restrictions concerning young persons must be observed.

- **This product has been classified in accordance with the hazard criteria of the CPR and the SDS contains all of the information required by the CPR**

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

* 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Date of preparation / last revision** 03/13/2014 / 16

- **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

EC50: effective concentration, 50 percent (in vivo)

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

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

- **Sources**

IUCLID (International Uniform Chemical Information Database)

International Chemical Safety Cards (ICSCs)

Data arise from manufacturers' data sheets, reference works and literature.

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

USA