

### 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 B**
- **Catalogue number:** 00530399, 530390, 4530390, 53556---0
- **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.

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



Xi; Irritant

R41: Risk of serious damage to eyes.

R31: Contact with acids liberates toxic gas.

- **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

- **Label elements**

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

· **Hazard pictograms** GHS05

· **Signal word** Danger

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

disodium disulphite

· **Hazard statements**

H318 Causes serious eye damage.

· **Precautionary statements**

P280 Wear protective gloves/protective clothing/eye protection/face protection.

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.

· **Canadian Hazard Symbols:**



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· **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: Mixtures**

· **Description:** Mixture of organic and inorganic compounds

· **Composition and Information on Ingredients:**

CAS: 7681-57-4 EINECS: 231-673-0 Index number: 016-063-00-2 RTECS: UX8225000	disodium disulphite ☒ Xn R22; ☒ Xi R41 R31 ☒ Eye Dam. 1, H318; ☒ Acute Tox. 4, H302	5-10%
CAS: 5808-22-0 EINECS: 204-972-9	Disodium 4,5-dihydroxynaphthalene-2,7-disulphonate ☒ Xi R36/37/38 ☒ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	5-10%
CAS: 14808-60-7 EINECS: 238-878-4 RTECS: VV 7330000	Quartz (SiO <sub>2</sub> )	30-40%

· **REACH - pre-registered substances** All components are REACH pre-registered.

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

## \* 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 rinse with plenty of water.

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:**

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

Seek immediate medical advice.

· **Most important symptoms and effects, both acute and delayed**

after swallowing of large amounts:

CNS disorders

depressions

profuse sweating

diarrhoea

vomiting

after swallowing:

irritations

allergic reactions

after inhalation:

coughing

mucous membrane irritation

breathing difficulty

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

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

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## \* 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<sub>x</sub>)  
Sodium oxide  
Nitrogen oxides (NO<sub>x</sub>)
  - **Advice for firefighters**
  - **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.
  - **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.  
Ambient fire may liberate hazardous vapours.
- 

## \* 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.
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## \* 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.
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## \* 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:	
<b>57-13-6 urea (40-50%)</b>	
WEEL (USA)	Long-term value: 10 mg/m <sup>3</sup>
<b>14808-60-7 Quartz (SiO<sub>2</sub>) (30-40%)</b>	
PEL (USA)	see Quartz listing
REL (USA)	Long-term value: 0.05* mg/m <sup>3</sup> *respirable dust; See Pocket Guide App. A
TLV (USA)	Long-term value: 0.025* mg/m <sup>3</sup> *as respirable fraction
EL (Canada)	Long-term value: 0.025 mg/m <sup>3</sup> ACGIH A2; IARC 1
EV (Canada)	Long-term value: 0.10* mg/m <sup>3</sup> *respirable fraction
<b>7681-57-4 disodium disulphite (5-10%)</b>	
REL (USA)	Long-term value: 5 mg/m <sup>3</sup>
TLV (USA)	Long-term value: 5 mg/m <sup>3</sup>
EL (Canada)	Long-term value: 5 mg/m <sup>3</sup>
EV (Canada)	Long-term value: 5 mg/m <sup>3</sup>

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

### · Exposure controls

#### · Personal protective equipment:

#### · General protective and hygienic measures:

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:  $\geq 0.11$  mm

#### · Penetration time of glove material

Value for the permeation: Level  $\leq 1$  (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:	Crystalline powder
· Color:	yellowish - brown
· Odor:	Odorless
· pH-value:	Not determined.
· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	Undetermined.
· Freezing Point:	Not applicable.
· Flash point:	Not applicable.
· Ignition temperature:	Undetermined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Specific Gravity:	Not applicable.

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· <b>Density:</b>	Not determined.
· <b>Vapour density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with Water:</b>	Partly soluble.
· <b>Coefficient of Water / Oil Distribution:</b>	Not applicable.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
· <b>Solids content:</b>	100.0 %
· <b>Other information</b>	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:**
  - alkali compounds
  - acids
  - oxidizing agents
- **Hazardous decomposition products:**
  - Carbon monoxide and carbon dioxide
  - Nitrogen oxides (NO<sub>x</sub>)
  - Sulfur oxides (SO<sub>x</sub>)
  - see chapter 5

## \*11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Quantitative data on the toxicity of the preparation are not available.

### · LD/LC50 values that are relevant for classification:

#### 7681-57-4 disodium disulphite

Oral	LD50	1540 mg/kg (rat) (MERCK)
Dermal	LD50	> 2000 mg/kg (rat) (RTECS)

- **Primary irritant effect:**
- **on the skin:** slight irritations possible
- **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.
- **Experience with humans:** May cause lung damages.

· **Additional toxicological information:** Irritant

### · Carcinogenic categories

#### · IARC (International Agency for Research on Cancer)

14808-60-7	Quartz (SiO <sub>2</sub> )	1
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#### · NTP (National Toxicology Program)

14808-60-7	Quartz (SiO <sub>2</sub> )	K
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#### · Carcinogenicity: NTP? IARC Monographs? OSHA Regulated?

Disodium disulphite:

A4 (not classifiable for humans or animals) by ACGIH

3 (not classifiable for humans) by IARC

Quartz:

Carcinogenicity IARC group 1, ACGIH A2, chronic toxic effect: silicosis

· **Teratogenicity:** Not found.

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

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- **Reproductive Toxicity:** Not found.
- **Synergistic Products:** None
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):** no further data available

## \*12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

### 7681-57-4 disodium disulphite

EC50	89 mg/l/48h (Daphnia magna) (MERCK)
LC50	150-220 mg/l/96h (Oncorhynchus mykiss) (MERCK)

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

- **Other information:**

Quantitative data on the ecological effect of this preparation are not available.  
The following statements refer to the individual components.

- **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

IC50	48 mg/l/72h (Desmodesmus subspicatus) (MERCK)
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- **Bacterial toxicity:**

### 7681-57-4 disodium disulphite

EC50	56 mg/l/17h (Pseudomonas putida) (IUCLID)
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- **Additional ecological information:**

- **CSB-value:**

### 7681-57-4 disodium disulphite

COD	0.165 g/g (.) (MERCK)
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- **General notes:**

Water danger class 3 (Self-assessment): extremely hazardous for water  
Do not allow product to reach ground water, water course or sewage system, even in small quantities.  
Danger to drinking water if even extremely small quantities leak into the ground.

- **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.

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## \* 14 Transport information

· UN-Number	
· DOT, ADR, ADN, IMDG, IATA	none
· UN proper shipping name	
· DOT, ADR, ADN, IMDG	none
· IATA	none
· Transport hazard class(es)	
· DOT, ADR, ADN, IMDG, IATA	
· Class	none
· Packing group	
· DOT, ADR, IMDG, IATA	none
· 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):	
None of the ingredients is listed.	
· Section 313 (Specific toxic chemical listings):	
None of the ingredients is listed.	
· TSCA (Toxic Substances Control Act):	
57-13-6	urea
14808-60-7	Quartz (SiO <sub>2</sub> )
7681-57-4	disodium disulphite
· Proposition 65	
· Chemicals known to cause cancer:	
14808-60-7	Quartz (SiO <sub>2</sub> )
· Chemicals known to cause reproductive toxicity for females:	
None of the ingredients is listed.	
· Chemicals known to cause reproductive toxicity for males:	
None of the ingredients is listed.	
· Chemicals known to cause developmental toxicity:	
None of the ingredients is listed.	
· Canadian Ingredient Disclosure List	
· Limit 0,1%	
None of the ingredients is listed.	
· Limit 1%	
14808-60-7	Quartz (SiO <sub>2</sub> )
7681-57-4	disodium disulphite
· Canadian Domestic Substances List (DSL)	
57-13-6	urea
14808-60-7	Quartz (SiO <sub>2</sub> )
7681-57-4	disodium disulphite

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<b>· Canadian Non-domestic Substance List</b>	
None of the ingredients is listed.	
<b>· EPA (Environmental Protection Agency)</b>	
57-13-6	urea
<b>· NIOSH-Ca (National Institute for Occupational Safety and Health)</b>	
14808-60-7	Quartz (SiO <sub>2</sub> )
<b>· OSHA-Ca (Occupational Safety &amp; Health Administration)</b>	
None of the ingredients is listed.	
<b>· MAK (German Maximum Workplace Concentration)</b>	
14808-60-7	Quartz (SiO <sub>2</sub> )
<b>· Australian Inventory of Chemical Substances</b>	
57-13-6	urea
14808-60-7	Quartz (SiO <sub>2</sub> )
7681-57-4	disodium disulphite
<b>· European EINECS</b>	
All ingredients are listed.	
<b>· Standard for the Uniform Scheduling of Drugs and Poisons</b>	
7681-57-4	disodium disulphite

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- **Information about limitation of use:** 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.

### · Relevant phrases

- H302 Harmful if swallowed.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- R22 Harmful if swallowed.
- R31 Contact with acids liberates toxic gas.
- R36/37/38 Irritating to eyes, respiratory system and skin.
- R41 Risk of serious damage to eyes.

· **Date of preparation / last revision** 03/13/2014 / 13

### · Abbreviations and acronyms:

- 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)
- GESTIS-Stoffdatenbank
- Data arise from manufacturers' data sheets, reference works and literature.

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