

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 05.01.2010 (DD.MM.YYYY)

Revision: 05.01.2010

1 Identification of substance:

- **Product name:** Vario TPTZ Iron F10 ml
- **Catalog number:** 251404Y
- **Application of the substance / the preparation:** Reagent for water analysis
- **Supplier:**
 YSI
 1725 Brannum Lane
 Yellow Springs, OH 45387
 USA
 tel: +1 937-767-7241
- **Informing department:**
 MSDSinfo@ysi.com
- **Emergency information:**
 Chemtrec toll free (USA and Canada): (800) 424-9300
 Chemtrec International Telephone Number: 001 703-527-3887 (Collect Calls Accepted)

2 Hazards identification

- **Hazard designation:**



Xn Harmful

- **Information pertaining to particular dangers for man and environment**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" (1999/45/EC) in the latest valid version.

R 22 Harmful if swallowed.

R 31 Contact with acids liberates toxic gas.

R 41 Risk of serious damage to eyes.

- **Classification system**

The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

3 Composition/information on ingredients

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

- **Dangerous components:**

CAS: 7681-57-4 EINECS: 231-673-0 Index number: 016-063-00-2	disodium disulphite	☒ Xn, ☒ Xi; R 22-31-41	10-20%
CAS: 7775-14-6 EINECS: 231-890-0 Index number: 016-028-00-1	sodium dithionite	☒ Xn; R 7-22-31	10-20%

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- **REACH - Pre-registered substances** All components are REACH pre-registered.
 - **Additional information** For the wording of the listed risk phrases refer to section 16.
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4 First aid measures

- **General information** Instantly remove any clothing soiled by the product.
 - **After inhalation** Supply fresh air; consult doctor in case of symptoms.
 - **After skin contact**
Instantly wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
 - **After eye contact**
Rinse opened eye for several minutes (at least 10 min) under running water.
Call a doctor immediately.
 - **After swallowing**
Rinse out mouth and then drink 1-2 glasses of water.
Induce vomiting.
 - **Information for doctor** Sulphites are strong sensitizers.
 - **The following symptoms may occur:**
after inhalation:
breathing difficulty
coughing
mucous membrane irritation
after swallowing:
allergic reactions
headache
sickness
vomiting
gastric or intestinal trouble
diarrhoea
-

5 Fire fighting measures

- **Suitable extinguishing agents**
Fire-extinguishing powder
Limestone powder
Dry sand
 - **Special hazards caused by the material, its products of combustion or resulting gases:**
Formation of toxic gases is possible during heating or in case of fire.
Sulphur oxides (SO_x)
 - **Protective equipment:**
Wear self-contained breathing apparatus.
Wear full protective suit.
 - **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Collect contaminated fire fighting water separately. It must not enter drains.
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6 Accidental release measures

- **Person-related safety precautions:**
Put on breathing apparatus.
Wear protective equipment. Keep unprotected persons away.
Avoid causing dust.
- **Measures for environmental protection:** Do not allow product to reach sewage system or water bodies.

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- **Measures for cleaning/collecting:**
 - Ensure adequate ventilation.
 - Collect mechanically.
 - Dispose of contaminated material as waste according to item 13.
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7 Handling and storage

- **Handling**
 - **Information for safe handling:**
 - Thorough dedusting.
 - Keep containers tightly sealed.
 - **Information about protection against explosions and fires:** Dust can combine with air to form an explosive mixture.
 - **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.
 - Store away from oxidizing agents.
 - **Further information about storage conditions:**
 - Protect from heat and direct sunlight.
 - Store under dry conditions.
 - Protect from humidity and keep away from water.
 - Protect from the effects of light.
 - **Recommended storage temperature:** 20°C +/- 5°C
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8 Exposure controls and personal protection

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

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

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

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

- **Personal protective equipment**

- **General protective and hygienic measures**

- Keep away from foodstuffs, beverages and food.

- Take off immediately all contaminated clothing

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

- Avoid contact with the eyes.

- **Breathing equipment:** Use breathing protection 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 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.
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9 Physical and chemical properties:

· Form:	Powder
· Colour:	White
· Odour:	Odourless
· Melting point/Melting range:	Not determined
· Boiling point/Boiling range:	Not determined
· Flash point:	Not applicable
· Danger of explosion:	Product is not explosive.
· Density	Not determined
· Solubility in / Miscibility with Water:	Soluble
· pH-value (10.4 g/l) at 20°C:	3.4
· Solvent content:	
Organic solvents:	0.0 %
· Solids content:	100.0 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.
- **Materials to be avoided:**
 - acids
 - sodium nitrite
 - sodium chlorite
 - oxidizing agents
- **Dangerous reactions** Contact with acids releases toxic gases
- **Dangerous products of decomposition:**
 - Sulphur dioxide
 - carbon monoxide and carbon dioxide
 - Sulphur oxides (SOx)
 - see chapter 5

11 Toxicological information

- **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)
7775-14-6 sodium dithionite		
Oral	LD50	2500 mg/kg (rat) IUCLID

- **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 is possible by prolonged exposure.

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Sensitizing effect by skin contact is possible by prolonged/repeated exposure.

- **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:

Harmful

Irritant

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

12 Ecological information:

- **Information about elimination (persistence and degradability):**

- **Other information:**

Quantitative data on the ecological effect of this product are not available.

The following statements refer to the individual components.

- **Behaviour in environmental systems:**

7775-14-6 sodium dithionite

log P(o/w)	<-4.7 (.)
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- **Ecotoxicological effects:**

- **Acquatic toxicity:**

7681-57-4 disodium disulphite

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

7775-14-6 sodium dithionite

EC50	98 mg/l/48h (Daphnia magna) MERCK
LC50	46-68 mg/l/96h (Leuciscus idus) IUCLID

- **Remark:**

Toxic for fish:

sulphates > 7 g/l

- **Algae toxicity:**

7681-57-4 disodium disulphite

IC50	48 mg/l/72h (Desmodesmus subspicatus) (MERCK)
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7775-14-6 sodium dithionite

IC50	206 mg/l/72h (Desmodesmus subspicatus) MERCK
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- **Bacterial toxicity:**

sulphates toxic > 2.5 g/l

7681-57-4 disodium disulphite

EC50	56 mg/l/17h (Pseudomonas putida) (IUCLID)
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7775-14-6 sodium dithionite

EC50	107 mg/l/17h (Pseudomonas putida) IUCLID
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- **Additional ecological information:**

- **COD-value:**

7681-57-4 disodium disulphite

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

Water hazard class 1 (German Regulation) (Self-assessment acc. VwVwS Annex 4): slightly hazardous for water.

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 unneutralized.

- **PBT assessments:** no data available

- **vPvB assessments:** no data available

13 Disposal considerations

- **Product:**

- **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 06	laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals
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- **Uncleaned packagings:**

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

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

14 Transport information

- **Land transport ADR/RID (cross-border)**

- **ADR/RID-GGVS/E Class:** -

- **Maritime transport IMDG:**

- **IMDG Class:** -

- **Marine pollutant:** No

- **Air transport ICAO-TI and IATA-DGR:**

- **ICAO/IATA Class:** -

- **Transport/Additional information:** Not dangerous according to the above specifications.

15 Regulatory information

- **Designation according to EC guidelines:**

The product has been classified and labelled in accordance with EC Directives / Ordinance on Hazardous Materials (GefStoffV)

- **Code letter and hazard designation of product:**

Xn Harmful

- **Hazard-determining components of labelling:**

disodium disulphite

sodium thiosulphate

- **Risk phrases:**

22 Harmful if swallowed.

31 Contact with acids liberates toxic gas.

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41 Risk of serious damage to eyes.

· Safety phrases:

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

36/39 Wear suitable protective clothing and eye/face protection.

60 This material and its container must be disposed of as hazardous waste.

· National regulations**· Information about limitation of use:**

Employment restrictions concerning young persons must be observed.

Observe employment restrictions for pregnant and nursing mothers according to the 'mother protection guideline' (92/85/EEC).

***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.

· Relevant R-phrases

22 Harmful if swallowed.

31 Contact with acids liberates toxic gas.

41 Risk of serious damage to eyes.

7 May cause fire.

· Sources

Data arise from reference works and literature.

International Chemical Safety Cards (ICSCs)

IUCLID (International Uniform Chemical Information Database)

· * Data compared to the previous version altered.