

Safety Data Sheet acc. to OSHA HCS (HazCom 2012)

Printing date 02/19/2019

Reviewed on 02/19/2019

1 Identification

- **Product identifier**
- **Trade name:** **Vario TPTZ Iron F10 ml**
- **Catalogue number:** 00530559, 530550, 4530550, 00530549
- **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:** + 1 866 928 0789 (English, French, Spanish)

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

- **Label elements**

· **GHS label elements** The product is classified and labeled according to the Hazard Communication Standard (HCS).

- **Hazard pictograms**



GHS05



GHS07

- **Signal word** Danger

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

disodium disulphite
sodium dithionite
methenamine

- **Hazard statements**

H318 Causes serious eye damage.
H317 May cause an allergic skin reaction.

- **Precautionary statements**

P261 Avoid breathing dust.
P280 Wear protective gloves / eye 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 doctor.

- **Other hazards** No further relevant information available.

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3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of organic and inorganic compounds
- **Composition and Information on Ingredients:**
Percent ranges are used due to the confidential product information.

CAS: 7681-57-4 EINECS: 231-673-0 Index number: 016-063-00-2 RTECS: UX8225000	disodium disulphite	☠ Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302	10–20%
CAS: 7775-14-6 EINECS: 231-890-0 Index number: 016-028-00-1	sodium dithionite	☠ Self-heat. 1, H251; ⚠ Acute Tox. 4, H302	10–20%
CAS: 100-97-0 EINECS: 202-905-8 Index number: 612-101-00-2 RTECS: MN 4725000	methenamine	☠ Flam. Sol. 2, H228; ⚠ Skin Sens. 1, H317	0.1–<1%

- **Additional information:** For the wording of the listed hazard 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 or rash occurs: Get medical advice/attention.
- **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 immediate medical advice.
- **Information for doctor:** Sulfites are strong sensitizers
- **Most important symptoms and effects, both acute and delayed**
burns
allergic reactions
after inhalation:
mucosal irritations, cough, breathing difficulty
after swallowing:
resorption
sickness
vomiting
gastric or intestinal disorders
diarrhoea
pain
- **Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
Fire-extinguishing powder
Carbon dioxide or dry chemical
Dry sand
- **For safety reasons unsuitable extinguishing agents:**
Water
Foam
- **Special hazards arising from the substance or mixture**
mixture with combustible ingredients
Substance/product is self extinguishing, but can burn when combined with flammable material.
Formation of toxic gases is possible during heating or in case of fire.

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In case of fire, the following can be released:

Sulfur oxides (SO_x)

Sodium oxide

Carbon monoxide (CO) and carbon dioxide (CO₂)

- **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**

- **Advice for non-emergency personnel:**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Avoid formation of dust.

- **Advice for emergency responders:**

Mount respiratory protective device.

Protective equipment: see section 8

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

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

Ensure adequate ventilation.

Pick up mechanically.

Dispose contaminated material as waste according to item 13.

- **Reference to other sections**

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- **Precautions for safe handling**

- **Advice on safe handling:**

Prevent formation of dust.

Thorough dedusting.

- **Hygiene measures:**

Avoid contact with the skin.

Avoid contact with the eyes.

Take off immediately all contaminated clothing.

Wash hands before breaks and at the end of work.

Do not eat, drink or smoke when using this product.

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

- **Storage:**

- **Requirements to be met by storerooms and receptacles:**

Store in a cool location.

Protect from heat.

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

Store away from oxidizing agents.

Do not store together with acids.

- **Further information about storage conditions:**

Store in cool, dry conditions in well sealed receptacles.

Protect from heat and direct sunlight.

Protect from exposure to the light.

Store in dry conditions.

Protect from humidity and water.

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

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

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8 Exposure controls/personal protection

- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

CAS: 7681-57-4 disodium disulphite	
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
CAS: 100-97-0 methenamine	
EV (Canada)	Short-term value: 2 mg/m ³ , 0.35 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.
- **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 respiratory protective device against the effects of fumes/dust/aerosol.
- **Recommended filter device for short term use:** Combination filter ABEK-P2
- **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**
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
- **Limitation and supervision of exposure into the environment:**
Do not allow product to reach sewage system or any water course.

9 Physical and chemical properties

Information on basic physical and chemical properties	
Appearance:	
Form / Physical state:	Powder
Color:	White
Odor:	Odorless
Odor threshold:	Not applicable.
pH-value (10.4 g/l) at 20°C (68°F):	3.4
Melting point/freezing point:	Not determined.
Initial boiling point and boiling range:	Not determined.
Flash point:	Not applicable.
Flammability (solid, gas):	The product is not combustible.
Decomposition temperature:	Not determined.
Auto-ignition temperature:	Product is not self-igniting.
Danger of explosion:	Product does not present an explosion hazard.
Flammability or explosive limits:	
Lower:	Not applicable.
Upper:	Not applicable.
Oxidizing properties:	none

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· Vapor Pressure:	Not applicable.
· Density:	Not determined.
· Relative density:	Not determined.
· Vapor density:	Not applicable.
· Evaporation rate:	Not applicable.
· Solubility(ies)	
Water:	Soluble.
· Partition coefficient (n-octanol/water):	Not applicable.
· Viscosity:	Not applicable.
· Solvent content:	
Organic solvents:	0.0 %
Solids content:	100.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** see section "Possibility of hazardous reactions"
- **Chemical stability** Stable at ambient temperature (room temperature).
- **Possibility of hazardous reactions**
 - Contact with acids releases toxic gases.
 - Reacts with humid air.
 - Reacts with oxidizing agents.
- **Conditions to avoid**
 - Exposure to moisture.
 - strong heating
- **Incompatible materials:**
 - sodium nitrite
 - sodium chlorite
- **Hazardous decomposition products:**
 - Sulfur dioxide
 - In case of fire: see section 5.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.

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

Oral	GHS ATE _(mix)	2590 mg/kg (.)
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· **LD/LC50 values that are relevant for classification:**

The following statements refer to the individual components.

CAS: 7681-57-4 disodium disulphite

Oral	LD50	1540 mg/kg (rat) (OECD 401) (MERCK)
Dermal	LD50.	>2000 mg/kg (rat) (RTECS)

CAS: 7775-14-6 sodium dithionite

Oral	LD50	500 mg/kg (ATE)
	LD50.	2500 mg/kg (rat) (IUCLID)

CAS: 100-97-0 methenamine

Oral	LD50	9200 mg/kg (rat) (IUCLID)
Dermal	LD50.	>2000 mg/kg (rat) (OECD 402)

- **Primary irritant effect:**
- **on the skin:** Based on available data, the classification criteria are not met.

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· **on the eye:**

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)

CAS: 7775-14-6 sodium dithionite

Irritation of skin	OECD 404	(rabbit: no irritation)
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CAS: 100-97-0 methenamine

Irritation of skin	OECD 404	(rabbit: no irritation)
Irritation of eyes	OECD 405	(rabbit: no irritation)

· **Sensitization:** May cause an allergic skin reaction.· **Information on components:****CAS: 7681-57-4 disodium disulphite**

Sensitization	OECD 406	(guinea pig: negative)
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CAS: 100-97-0 methenamine

Sensitization	OECD 406	(guinea pig: positive)
	Patch test (human)	(positive) (IUCLID)

· **Carcinogenic categories**· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **Other information:** see section 8 / 15· **Synergistic Products:** None· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):** The following statements refer to the mixture:· **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)
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CAS: 100-97-0 methenamine

OECD 471	(negative) (Bacterial Reverse Mutation Test - Ames test)
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OECD 474	(negative) (Mammalian Erythrocyte Micronucleus Test) (IUCLID)
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12 Ecological information

· 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)
CAS: 7775-14-6 sodium dithionite	
EC50	98 mg/l/48h (Daphnia magna) MERCK
IC50	206 mg/l/72h (Desmodesmus subspicatus) MERCK
LC50	46–68 mg/l/96h (gold orfe) (DIN 38412) (Merck)
CAS: 100-97-0 methenamine	
EC50	36 mg/l/48h (Daphnia magna) (IUCLID)
EC10	5 mg/l (fish)
LC50 (static)	41 mg/l/96h (bluegill) (US-EPA)

· Bacterial toxicity:

sulfates toxic > 2.5 g/l

CAS: 7681-57-4 disodium disulphite	
EC50	56 mg/l (Pseudomonas putida) (17h) (IUCLID)
CAS: 7775-14-6 sodium dithionite	
EC50	107 mg/l (Pseudomonas putida) IUCLID
CAS: 100-97-0 methenamine	
EC50 (static)	>5000 mg/l (Bacterial toxicity) (DIN 38412) (Merck, Vibrio fischeri)

· Other information:

Toxic for fish:

sulfates > 7 g/l

· Persistence and degradability

CAS: 100-97-0 methenamine	
OECD 302 C	39–47 % / 28 d (not readily biodegradable) (Modified MITI Test (II))

· Bioaccumulative potential

CAS: 7775-14-6 sodium dithionite	
log Pow	<-4.7 (.) (calculated)
CAS: 100-97-0 methenamine	
log Pow	-2.84 (.) (experimental) (IUCLID)

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

· **Other adverse effects** Avoid transfer into the environment.

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.

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- **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, IMDG, IATA 	none
<ul style="list-style-type: none"> · UN proper shipping name · DOT · IMDG, IATA 	none none
<ul style="list-style-type: none"> · Transport hazard class(es) · DOT, IMDG, IATA · Class 	none
<ul style="list-style-type: none"> · Packing group · DOT, IMDG, IATA 	none
<ul style="list-style-type: none"> · Environmental hazards: 	Not applicable.
<ul style="list-style-type: none"> · Special precautions for user 	Not applicable.
<ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	Not applicable.
<ul style="list-style-type: none"> · Transport/Additional information: 	Not dangerous according to the above specifications.

15 Regulatory information

<ul style="list-style-type: none"> · Safety, health and environmental regulations/legislation specific for the substance or mixture · Sara 					
<ul style="list-style-type: none"> · Section 355 (Extremely hazardous substances): 					
None of the ingredients is listed.					
<ul style="list-style-type: none"> · Section 313 (Specific toxic chemical listings): 					
None of the ingredients is listed.					
<ul style="list-style-type: none"> · TSCA (Toxic Substances Control Act): 					
All ingredients are listed.					
<ul style="list-style-type: none"> · Proposition 65 					
<ul style="list-style-type: none"> · Chemicals known to cause cancer: 					
None of the ingredients is listed.					
<ul style="list-style-type: none"> · Chemicals known to cause reproductive toxicity for females: 					
None of the ingredients is listed.					
<ul style="list-style-type: none"> · Chemicals known to cause reproductive toxicity for males: 					
None of the ingredients is listed.					
<ul style="list-style-type: none"> · Chemicals known to cause developmental toxicity: 					
None of the ingredients is listed.					
<ul style="list-style-type: none"> · New Jersey Right-to-Know List: 					
CAS: 7681-57-4	disodium disulphite				
CAS: 7775-14-6	sodium dithionite				
CAS: 100-97-0	methenamine				
<ul style="list-style-type: none"> · New Jersey Special Hazardous Substance List: 					
CAS: 7681-57-4	disodium disulphite				CO
CAS: 7775-14-6	sodium dithionite				R2
<ul style="list-style-type: none"> · Pennsylvania Right-to-Know List: 					
CAS: 7681-57-4	disodium disulphite				

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CAS: 7775-14-6 | sodium dithionite

· Pennsylvania Special Hazardous Substance List:

None of the ingredients is listed.

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

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

· **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

H228 Flammable solid.

H251 Self-heating: may catch fire.

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

· **Date of preparation / last revision** 02/19/2019 / 36

· 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

ACGIH® - American Conference of Governmental Industrial Hygienists

•A1 - Confirmed human carcinogen

•A2 - Suspected human carcinogen

•A3 - Confirmed animal carcinogen with unknown relevance to humans

•A4 - Not classifiable as a human carcinogen

•A5 - Not suspected as a human carcinogen

IARC - International Agency for Research on Cancer

•Group 1 - Carcinogenic to humans

•Group 2A - Probably carcinogenic to humans

•Group 2B - Possibly carcinogenic to humans

•Group 3 - Not classifiable as to carcinogenicity to humans

•Group 4 - Probably not carcinogenic to humans

NTP - National Toxicology Program, U.S. Department of Health and Human Services

•Group K - Known to be Human Carcinogens

•Group R - Reasonably Anticipated to be Human Carcinogens

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Flam. Sol. 2: Flammable solids – Category 2

Self-heat. 1: Self-heating substances and mixtures – Category 1

Acute Tox. 4: Acute toxicity – Category 4

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

Skin Sens. 1: Skin sensitisation – 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.**