# Safety data sheet
## according to Regulation (EC) No 1907/2006, Article 31

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**

· **Product name: Vario Ferro F10, 25 ml**

· **Catalog number:** 00530569, 530560, 530563, 00570569, 530570, 530562, 00530579, 00570579, 56U530560

· **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 (0)231 94510-0
e-mail: sales@lovibond.com

The Tintometer Limited
Lovibond® House
Sun Rise Way
Amesbury
Wiltshire SP4 7GR
United Kingdom
phone : +44 1980 664800
e-mail: SDS@lovibond.uk

· **Informing department:**
e-mail: sds@lovibond.com
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.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the GB CLP regulation.
· **Hazard pictograms**


GHS05 GHS07

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· **Signal word** Danger
· **Hazard-determining components of labelling:**
disodium disulphite
sodium dithionite
1,10-phenanthroline
· **Hazard statements**
H302 Harmful if swallowed.
H318 Causes serious eye damage.
H412 Harmful to aquatic life with long lasting effects.
· **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.
· **Additional information:**
EUH031 Contact with acids liberates toxic gas.
EUH208 Contains methenamine. May produce an allergic reaction.

· **2.3 Other hazards** No further relevant information available.

· **Results of PBT and vPvB assessment**
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.
· **Determination of endocrine-disrupting properties**
The product does not contain substances with endocrine disrupting properties.

## SECTION 3: Composition/information on ingredients

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

· **Dangerous components:**

| | | |
|---|---|---|
| CAS: 7775-14-6<br>EINECS: 231-890-0<br>Index No: 016-028-00-1 | sodium dithionite<br>Self-heat. 1, H251; Acute Tox. 4, H302, EUH031<br>ATE: LD50 oral: 500 mg/kg | 20–30% |
| CAS: 7681-57-4<br>EINECS: 231-673-0<br>Index No: 016-063-00-2<br>Reg.nr.: 01-2119531326-45-XXXX | disodium disulphite<br>Eye Dam. 1, H318; Acute Tox. 4, H302, EUH031 | 20–30% |
| CAS: 497-19-8<br>EINECS: 207-838-8<br>Index No: 011-005-00-2<br>Reg.nr.: 01-2119485498-19-XXXX | sodium carbonate<br>Eye Irrit. 2, H319 | 2.5–5% |
| CAS: 66-71-7<br>EINECS: 200-629-2<br>Index No: 613-092-00-8 | 1,10-phenanthroline<br>Acute Tox. 3, H301; Aquatic Acute 1, H400 (M=10); Aquatic Chronic 1, H410 (M=1) | 0.25–<2.5% |
| CAS: 100-97-0<br>EINECS: 202-905-8<br>Index No: 612-101-00-2<br>Reg.nr.: 01-2119474895-20-XXXX | methenamine<br>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.

## 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; consult doctor in case of symptoms.
· **After skin contact**
Instantly rinse with 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.

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Call a doctor immediately.
· **After swallowing**
Rinse out mouth and then drink 1-2 glasses of water.
Seek medical treatment.
· **Information for doctor** Sulphites are strong sensitizers.
· **4.2 Most important symptoms and effects, both acute and delayed:**
Irritation and corrosion
allergic reactions
after inhalation:
mucosal irritations, cough, shortness of breath
after swallowing:
absorption
mucous membrane irritation
sickness
vomiting
diarrhoea
pain
disorder of electrolyte balance
· **4.3 Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

## SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents**
Fire-extinguishing powder
Carbon dioxide ($CO_2$)
Dry sand
· **For safety reasons unsuitable extinguishing agents**
Water
Foam
--> exothermic reaction
· **5.2 Special hazards arising from the substance or mixture**
mixture with combustible ingredients
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
Carbon monoxide (CO) and carbon dioxide ($CO_2$)
· **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.
Ambient fire may liberate hazardous vapours.

## 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.
Ensure adequate ventilation
Use breathing protection against the effects of fumes/dust/aerosol.
Avoid causing dust.
· **Advice for emergency responders:**
Put on breathing apparatus.
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.

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· **6.4 Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

## SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
· **Advice on safe handling:**
Prevent formation of dust.
Provide suction extractors if dust is formed.
· **Hygiene measures:**
Avoid contact with the skin.
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**
· **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 oxidising agents.
· **Further information about storage conditions:**
Store in cool, dry conditions in well sealed containers.
Protect from heat and direct sunlight.
Protect from the effects of light.
Protect from humidity and keep away from water.
This product is hygroscopic.
· **Recommended storage temperature:** 20°C +/- 5°C

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

## 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/m³ |

· **Regulatory information** WEL (Great Britain): EH40/2020

· **DNELs**
Derived No Effect Level (DNEL)

| | | |
|---|---|---|
| **CAS: 7775-14-6 sodium dithionite** | | |
| Dermal | DNEL | 8.8 mg/kg (Worker / long-term /systemic effects) |
| Inhalative | DNEL | 10 mg/m³ (Worker / long-term /systemic effects) |
| **CAS: 7681-57-4 disodium disulphite** | | |
| Inhalative | DNEL | 10 mg/m³ (Worker / long-term /systemic effects) (MERCK) |
| **CAS: 497-19-8 sodium carbonate** | | |
| Inhalative | DNEL | 10 mg/m³ (Worker / long-term / local effects) |
| **CAS: 100-97-0 methenamine** | | |
| Dermal | DNEL | 8.8 mg/kg (Worker / long-term /systemic effects) |
| Inhalative | DNEL | 31 mg/m³ (Worker / long-term /systemic effects) |

· **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)

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| | |
|---|---|
| **CAS: 7775-14-6 sodium dithionite** | |
| PNEC | 45.3 mg/l (Sewage treatment plant)<br>0.1 mg/l (Marine water)<br>1 mg/l (Fresh water) |
| **CAS: 7681-57-4 disodium disulphite** | |
| PNEC | 75.4 mg/l (Sewage treatment plant)<br>0.1 mg/l (Marine water)<br>1 mg/l (Fresh water) |
| **CAS: 100-97-0 methenamine** | |
| PNEC | 100 mg/l (Sewage treatment plant)<br>0.5 mg/l (Marine water)<br>2.4 mg/l (Fresh water sediment)<br>3 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.

· **Individual protection measures, such as personal protective equipment**
Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.
· **Eye/face protection** Tightly sealed safety glasses.
· **Hand protection**
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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Other skin protection (body protection):** Protective work clothing.
· **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.
· **Recommended filter device for short term use:** Combination filter ABEK-P2

· **Environmental exposure controls**
Do not allow product to reach sewage system or water bodies.
Risk of explosion.

## SECTION 9: Physical and chemical properties

| | |
|---|---|
| · **9.1 Information on basic physical and chemical properties** | |
| · **Physical state** | Solid. |
| · **Form:** | Powder |
| · **Colour:** | Whitish |
| · **Odour:** | Pungent |
| · **Odour threshold:** | Not determined. |
| · **Melting point/Freezing point:** | Not determined. |
| · **Boiling point or initial boiling point and boiling range** | Not determined. |
| · **Flammability** | mixture with combustible ingredients |
| · **Explosive properties:** | Risk of dust explosion if enriched with fine dust in presence of air |
| · **Lower and upper explosion limit** | |
| **Lower:** | Not determined. |
| **Upper:** | Not applicable (solid). |
| · **Flash point:** | Not applicable. |
| · **Auto-ignition temperature:** | Not applicable (solid). |
| · **Decomposition temperature:** | > 80°C (CAS 7775-14-6) |

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| | |
|---|---|
| · **pH (12 g/l) at 20°C** | 5.6 |
| · **Kinematic viscosity** | Not applicable (solid). |
| · **Solubility** | |
| · **Water:** | Soluble |
| · **Partition coefficient n-octanol/water (log value)** | Not applicable (mixture). |
| · **Vapour pressure:** | Not applicable. |
| · **Density and/or relative density** | |
| · **Density:** | Not determined. |
| · **Relative density:** | Not determined. |
| · **Relative gas density** | Not applicable (solid). |
| · **Particle characteristics** | Not determined. |

· **9.2 Other information**

| | |
|---|---|
| · **Information with regard to physical hazard classes** | |
| · **Corrosive to metals** | Void |
| · **Other safety characteristics** | |
| · **Oxidising properties:** | none |
| · **Additional information** | |
| · **Solids content:** | 100.0 % |

## SECTION 10: Stability and reactivity

· **10.1 Reactivity** Dust can combine with air to form an explosive mixture.
· **10.2 Chemical stability**
Stable at ambient temperature (room temperature).
sensitive to moisture
· **10.3 Possibility of hazardous reactions**
Contact with acids releases toxic gases
Reacts with acids releasing sulphur dioxide
Reacts with oxidizing agents
Reacts with moist air
· **10.4 Conditions to avoid**
Exposure to moisture.
Strong heating (decomposition)
· **10.5 Incompatible materials:**
sodium nitrite
sodium chlorite
· **10.6 Hazardous decomposition products:**
Sulphur dioxide
(with water)
see section 5

## SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

· **Acute toxicity**
Classification according to calculation procedure:
Harmful if swallowed.

| · **Acute toxicity estimate ($ATE_{(MIX)}$) - Calculation method:** | | |
|---|---|---|
| Oral | CLP $ATE_{(MIX)}$ | <1229 mg/kg (.) |

| · **LD/LC50 values that are relevant for classification:** | | |
|---|---|---|
| **CAS: 7775-14-6 sodium dithionite** | | |
| Oral | LD50 | 500 mg/kg (ATE) |
| | LD50. | 2500 mg/kg (rat) (IUCLID) |
| **CAS: 7681-57-4 disodium disulphite** | | |
| Oral | LD50 | 1540 mg/kg (rat) (OECD 401) (MERCK) |

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| | | |
|---|---|---|
| Dermal | LD50. | >2000 mg/kg (rat)<br>(RTECS) |
| Inhalative | LC50 | >5.5 mg/l /4h (rat) (OECD 403)<br>Registrant, ECHA: the value is given in analogy to sodium sulphite |
| **CAS: 497-19-8 sodium carbonate** | | |
| Oral | LD50 | 2800 mg/kg (rat)<br>(Registrant, ECHA) |
| | LDLo | 714 mg/kg (human)<br>(RTECS) |
| Dermal | LD50. | >2000 mg/kg (rabbit) (US-EPA)<br>(Registrant, ECHA: No deaths occured at this concentration) |
| Inhalative | LC50 | 5750 mg/l/2h (rat) (OECD 403) |
| **CAS: 66-71-7 1,10-phenanthroline** | | |
| Oral | LD50 | 132 mg/kg (rat) |
| **CAS: 100-97-0 methenamine** | | |
| Oral | LD50 | >20000 mg/kg (rat)<br>(ECHA) |
| Dermal | LD50. | >2000 mg/kg (rat) (OECD 402) |

· **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 497-19-8: chronic: dermatitis

| | | |
|---|---|---|
| **CAS: 7775-14-6 sodium dithionite** | | |
| Irritation of skin | OECD 404 | (rabbit: no irritation) |
| **CAS: 7681-57-4 disodium disulphite** | | |
| Irritation of skin | OECD 404 | (rabbit: no irritation) |
| Irritation of eyes | OECD 492 | (rabbit: severe irritations) |
| **CAS: 497-19-8 sodium carbonate** | | |
| Irritation of skin | OECD 404 | (rabbit: slight irritation) |
| Irritation of eyes | OECD 492 | (rabbit: irritation) (US-EPA)<br>(IUCLID) |
| **CAS: 100-97-0 methenamine** | | |
| Irritation of skin | OECD 404 | (rabbit: no irritation) |
| Irritation of eyes | OECD 492 | (rabbit: no irritation) |

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **Information on components:**
Contains methenamine. May produce an allergic reaction.

| | | |
|---|---|---|
| **CAS: 7681-57-4 disodium disulphite** | | |
| Sensitisation | OECD 406 | (guinea pig: negative) |
| | OECD 429 | (negative)<br>Local lymph node assay (LLNA) - Mouse<br>Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals. |
| **CAS: 100-97-0 methenamine** | | |
| Sensitisation | OECD 406 | (guinea pig: positive) |
| | Patch test (human) | (positive)<br>(IUCLID) |

· **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.

· **Information on components:**
CAS 7681-57-4: Did not show teratogenic effects in animal experients.
CAS 7681-57-4: Did not show carcinogenic effects in animal experiments (IUCLID).

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CAS 7681-57-4: No impairment of reproductive performance in animal experiments (IUCLID).
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) |

| **CAS: 497-19-8 sodium carbonate** | |
|---|---|
| OECD 471 | (Bacterial Reverse Mutation Test - Ames test)<br>negative / Escherichia coli |

| **CAS: 100-97-0 methenamine** | |
|---|---|
| OECD 471 | (negative) (Bacterial Reverse Mutation Test - Ames test) |
| OECD 474 | (negative) (Mammalian Erythrocyte Micronucleus Test)<br>(IUCLID) |

· **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 likely routes of exposure**
When working with sodium metabisulfite, inhalative and dermal exposures are to be expected. [GESTIS]

| · **Additional toxicological information:** |
|---|
| **CAS: 7775-14-6 sodium dithionite** |
| . (source: GESTIS)<br>From general professional experience, an irritating effect on the mucous membranes is pointed out.<br>An irritating effect on the eyes was demonstrated in several tests on the rabbit eye.<br>Irrespective of the low general toxicity, however, it should be taken into account that released bisulfite/sulfite can trigger acute hypersensitivity reactions in sulfite-sensitive people (often asthmatics) (usually after oral or inhalative intake of small doses). |
| **CAS: 7681-57-4 disodium disulphite** |
| . (source: GESTIS)<br>Main toxic effects:<br>Acute: Irritant effect on the eyes and respiratory tract, acute intolerance reactions (in case of disposition)<br>chronic: allergic skin diseases (rare)<br><br>Further information (Merck):<br>Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.<br>Persons with allergies and/or asthma may exhibit hypersensitivity to sulfites. |

· **11.2 Information on other hazards**
· **Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.

· **Other information**
According to the information available to us, the chemical, physical and toxicological properties of the substances mentioned in Chapter 3 have not been thoroughly investigated.

## SECTION 12: Ecological information

· **12.1 Toxicity**

| · **Aquatic toxicity:** | |
|---|---|
| **CAS: 7775-14-6 sodium dithionite** | |
| EC50 | 98 mg/l/48h (Daphnia magna)<br>MERCK |
| IC50 | 206 mg/l/72h (Desmodesmus subspicatus)<br>MERCK |
| LC50 | 46–68 mg/l/96h (gold orfe) (DIN 38412)<br>(Merck) |
| **CAS: 7681-57-4 disodium disulphite** | |
| EC50 | 89 mg/l/48h (Daphnia magna) (OECD 202)<br>(MERCK) |

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| | |
|---|---|
| IC50 | 48 mg/l/72h (Desmodesmus subspicatus) (OECD 201)<br>(MERCK) |
| LC50 | 150–220 mg/l/96h (rainbow trout) (DIN 38412 Teil 15)<br>(Merck) |
| **CAS: 497-19-8 sodium carbonate** | |
| EC50 | 220–227 mg/l/48h (Daphnia magna) (US-EPA)<br>(Merck) |
| LC50 | 300 mg/l/96h (bluegill) (IUCLID)<br>(Registrant, ECHA) |
| **CAS: 100-97-0 methenamine** | |
| EC50 | 36 mg/l/48h (Daphnia magna)<br>(IUCLID) |
| EC10 | 5 mg/l (fish) |
| LC50 (static) | 41 mg/l/96h (bluegill)<br>(US-EPA) |

· **Bacterial toxicity:**
sulphates toxic > 2.5 g/l

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

· **Other information:**
Toxic for fish:
Sulphates > 7 g/l

| · **12.2 Persistence and degradability** | |
|---|---|
| **CAS: 100-97-0 methenamine** | |
| OECD 302 C | 39–47 % / 28 d (not readily biodegradable) (Modified MITI Test (II)) |

· **12.3 Bioaccumulative potential**
Pow = n-octanol/wasser partition coefficient
log Pow < 1 = Does not accumulate in organisms.
log Pow 1-3 = Not worth-mentioning accumulating in organisms.

| | |
|---|---|
| **CAS: 7775-14-6 sodium dithionite** | |
| log Pow | <-4.7 (.) (calculated) |
| **CAS: 66-71-7 1,10-phenanthroline** | |
| log Pow | 1.78 (.)<br>(Merck) |
| **CAS: 100-97-0 methenamine** | |
| log Pow | -2.18 (.) (experimental)<br>(IUCLID) |

· **12.4 Mobility in soil** No further relevant information available.
· **12.5 Results of PBT and vPvB assessment**
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.
· **12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.
· **12.7 Other adverse effects**
Reacts with water to form toxic decomposition products.
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.



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## 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 06* | laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals |

· **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 or ID 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 Maritime transport in bulk according to IMO instruments** | 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**

· **Poisons Act UK**

| · **Regulated explosives precursors** | | |
|---|---|---|
| CAS: 100-97-0 | methenamine | Listed |

· **Regulated poisons**
None of the ingredients is listed.

· **Reportable explosives precursors**
None of the ingredients is listed.

· **Reportable poisons**
None of the ingredients is listed.

· **Regulation (EU) 2019/1148 on the marketing and use of explosives precursors**
not regulated: homogeneous mixture of more than five components with c <1% (w/w) substance Annex I or II

| · **explosives precursors - ANNEX II** | |
|---|---|
| CAS: 100-97-0 | methenamine |

· **Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (PIC)**
None of the ingredients is listed.

· **Regulation (EC) No 1334/2000 setting up a Community regime for the control of exports of dual-use items and technology:**
None of the ingredients is listed.

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# Safety data sheet
## according to Regulation (EC) No 1907/2006, Article 31

Printing date 04.06.2025 Version number 50 (replaces version 49) Revision: 28.05.2025

**Product name: Vario Ferro F10, 25 ml**

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· **Regulation (EC) No 273/2004 on drug precursors**
None of the ingredients is listed.

· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**
None of the ingredients is listed.

· **REGULATION (EU) 2024/590 on substances that deplete the ozone layer**
None of the ingredients is listed.

· **REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)**
None of the ingredients is listed.

· **LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)**
None of the ingredients is listed.

· **Substances of very high concern (SVHC) according to REACH, Article 57**
This product does not contain any substances of very high concern above the legal concentration limit of ≥ 0.1% (w / w).
· **Substances of very high concern (SVHC) according to UK REACH**
This product does not contain any substances of very high concern above the legal concentration limit of ≥ 0.1% (w / w).

· **Directive 2012/18/EU (SEVESO III):**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **Information about limitation of use:** Not required.

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

## 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.
This Safety Data Sheets is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

· **Training hints** Provide adequate information, instruction and training for operators.

· **Relevant phrases**
H228 Flammable solid.
H251 Self-heating: may catch fire.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
EUH031 Contact with acids liberates toxic gas.

· **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 relatif au transport international 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
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (UK REACH)
PNEC: Predicted No-Effect Concentration (UK REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
ATE: Acute toxicity estimate values
Flam. Sol. 2: Flammable solids – Category 2

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# Safety data sheet
## according to Regulation (EC) No 1907/2006, Article 31



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Self-heat. 1: Self-heating substances and mixtures – Category 1
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· **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 )
ECHA: European CHemicals Agency http://echa.europa.eu
GESTIS- Stoffdatenbank (Substance Database, Germany)

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