

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

Printing date 07/10/2017

Reviewed on 07/10/2017

1 Identification

- **Product identifier**
- **Trade name:** **Vario Silica HR Molybdate F10, 25 ml**
- **Catalogue number:** 00531729, 00531959, 531720, 531723, 531950, 531953, 4531720, 4531950
- **CAS Number:**
10102-40-6
- **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**
The substance is not classified according to the Globally Harmonized System (GHS).
- **Label elements**
- **GHS label elements** none
- **Hazard pictograms** none
- **Signal word** none
- **Hazard statements** none
- **Other hazards** No further relevant information available.

3 Composition/information on ingredients

- **Chemical characterization:** **Substances**
- **CAS No. Description**
10102-40-6 Sodium molybdate dihydrate
- **Identification number(s)**
- **EC number:** 231-551-7

4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes (at least 15 min) under running water. If symptoms persist, consult a doctor.
- **After swallowing:**
Rinse out mouth and then drink 1-2 glasses of water.
If symptoms persist consult doctor.
- **Most important symptoms and effects, both acute and delayed**
after inhalation:
mucous membrane irritation
coughing
breathing difficulty
after swallowing:

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sickness
vomiting

· **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**
The product is not combustible.
Formation of toxic gases is possible during heating or in case of fire.
- **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:** Avoid inhalation of dust.
- **Advice for emergency responders:** 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

- **Handling:**
- **Precautions for safe handling**
- **Advice on safe handling:**
Thorough dedusting.
Prevent formation of dust.
- **Hygiene measures:**
The usual precautionary measures for handling chemicals should be followed.
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.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
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:

CAS: 10102-40-6 Sodium molybdate dihydrate

ACGIH TLV (USA) Long-term value: 0.5 / 8 h as Mo mg/m³
Form: respirable fractionOSHA PEL (USA) Long-term value: 0.5 / 8 h as Mo mg/m³
Form: soluble

- 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: Filter P1

- Protection of hands:

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:

Safety glasses

use against the effects of fumes / dust

- 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 g/l) at 20°C (68 °F):

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- Melting point/freezing point:

687°C (1269 °F)

- Initial boiling point and boiling range:

Not applicable.

- Flash point:

Not applicable.

- Flammability (solid, gas):

The product is not combustible.

- Ignition temperature:

Not applicable.

- Decomposition temperature:

130°C (266 °F)

- Auto-ignition temperature:

Not determined.

- Danger of explosion:

Product does not present an explosion hazard.

- Flammability or explosive limits:

Lower: Not applicable.

Upper: Not applicable.

- Oxidizing properties:

none

- Vapor Pressure:

Not applicable.

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· Density at 20°C (68 °F):	3.6 g/cm ³ (30.042 lbs/gal)
· Relative density:	Not determined.
· Vapor density:	Not applicable.
· Evaporation rate:	Not applicable.
· Solubility(ies)	
Water at 20°C (68 °F):	840 g/l Easily soluble.
· Partition coefficient (n-octanol/water):	Not applicable.
· Viscosity:	Not applicable.
· 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).
Loss of constitutional water on heating.
- **Possibility of hazardous reactions** No further relevant information available.
- **Conditions to avoid** Strong heating (decomposition)
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No further relevant information available.

11 Toxicological information

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

· LD/LC50 values that are relevant for classification:		
CAS: 10102-40-6 Sodium molybdate dihydrate		
Oral	LD50	4,233 mg/kg (rat) (Merck)
Dermal	LD50.	>2,000 mg/kg (rat) (OECD 402) (Registrant, ECHA: dosis test anhydrous substance CAS 7631-95-0; no deaths at this concentration)
Inhalative	LC50.	>1.93 mg/l/4h (rat) (OECD 403) (Registrant, ECHA: dosis test anhydrous substance CAS 7631-95-0; no deaths at this concentration)

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

· Information on components:		
CAS: 10102-40-6 Sodium molybdate dihydrate		
Irritation of skin	OECD 404	(rabbit: no irritation)
Irritation of eyes	OECD 405	(rabbit: slight irritation)

- **Sensitization:** Based on available data, the classification criteria are not met.

· Information on components:		
CAS: 10102-40-6 Sodium molybdate dihydrate		
Sensitization	OECD 406	(guinea pig: negative)

- **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)
Substance is not listed.

· NTP (National Toxicology Program)
Substance is not listed.

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· OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

· **Other information:** see section 8 / 15· **Synergistic Products:** None· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):**· **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.· **Additional toxicological information:**

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

In case of an acute molybdenum(VI) intoxication: diarrhoea, anaemia, fatigue, loss of appetite.

· **Experience with humans:** Mo(VI): Can cause liver, kidney damages.

12 Ecological information

· **Toxicity**· **Aquatic toxicity:****CAS: 10102-40-6 Sodium molybdate dihydrate**

EC50 330 mg/l/48h (Daphnia magna)

IC50 >100 mg/l/72h (Desmodesmus subspicatus)

>100 mg/l/72h (Pseudokirchneriella subcapitata)

NOEC 3,200 mg/l/96h (rainbow trout)

NOEC 4.6 mg/l/72 h (Pseudokirchneriella subcapitata)

NOEC 100 mg/l/48 h (Daphnia magna)

· **Bacterial toxicity:****CAS: 10102-40-6 Sodium molybdate dihydrate**

EC10 50 mg/l (Pseudomonas putida) (18h)

· **Other information:**

Toxic for fish:

molybdenum compounds in general: > 25 mg/l

· **Persistence and degradability** No further relevant information available.· **Other information:** Methods for the determination of biodegradability are not applicable to inorganic substances.· **Bioaccumulative potential** No further relevant information available.· **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.

Disposal must be made according to official regulations.

· **Uncleaned packagings:**· **Recommendation:** Disposal must be made according to official regulations.· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **UN-Number**· **DOT, IMDG, IATA**

none

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· UN proper shipping name	
· DOT, IMDG, IATA	none
· Transport hazard class(es)	
· DOT, IMDG, IATA	
· Class	none
· Packing group	
· DOT, IMDG, IATA	none
· Environmental hazards:	Not applicable.
· 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.

*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):

CAS 10102-40-6 is not on the TSCA Inventory listed, because it is a hydrate. It is listed on the CAS 7631-95-0 number for the anhydrous form.

· 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.

· New Jersey Right-to-Know List:

Substance is not listed.

· New Jersey Special Hazardous Substance List:

Substance is not listed.

· Pennsylvania Right-to-Know List:

Substance is not listed.

· Pennsylvania Special Hazardous 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.

· Information about limitation of use: Not required.

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

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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** 07/10/2017 / 17

• **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

ADR: Accord européen sur le transport 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

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial 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

• **Sources**

Data arise from safety data sheets, reference works and literature.

ECHA: European CHemicals Agency <http://echa.europa.eu>

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