

Material Safety Data Sheet According to 91/155 EEC

Reviewed on 18.02.2005

* 1 Identification of substance:

- **Product details:** Reagent for water analysis
- **Product name:** **Molybdenum HR Set (Vario Molybdenum HR3 F10)**
- **Catalog number:** 251 407 **Model:** Mo-1 TP
- **Supplier:**
WTW Wissenschaftlich-Technische Werkstätten GmbH
Dr.-Karl-Slevogt-Straße 1
D-82362 Weilheim
Fax: +49(0)881 183-420
Tel.: +49(0)881 183-0
Tel.: +49(0)881 183-100
Internet: <http://www.WTW.com>
E-Mail: Info@WTW.com
- **Emergency information:**
Poison Center Berlin, Germany
Tel.: +49(0)30 19240

* 2 Composition/Data on components:

- **Description:** Mixture of the substances listed below with harmless additions.

- **Dangerous components:**

CAS: 65208-41-5	calcium thioglycollate trihydrate	<input checked="" type="checkbox"/> Xn; R 22-43	20-25%
EINECS: 249-881-5			

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

* 3 Hazards identification

- **Hazard designation:**



Xi Irritant

- **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" in the latest valid version.

R 43 May cause sensitisation by skin contact.

- **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.

* 4 First aid measures

- **General information**

Instantly remove any clothing soiled by the product.

Take affected persons into the open air.

- **After inhalation** Supply fresh air and call for doctor for safety reasons.

- **After skin contact**

Instantly rinse with water.

Seek medical treatment.

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- **After eye contact**
Rinse opened eye for several minutes under running water.
Call a doctor immediately.
 - **After swallowing** Drink copious amounts of water and provide fresh air. Instantly call for doctor.
 - **The following symptoms may occur:**
after inhalation:
irritation
after swallowing:
sickness
vomiting
mucous membrane irritation
gastric or intestinal trouble
cramps
 - **Danger** risk of skin sensitization
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* 5 Fire fighting measures

- **Suitable extinguishing agents** Use fire fighting measures that suit the environment.
 - **Special hazards caused by the material, its products of combustion or resulting gases:**
Development of hazardous combustion gases or vapours possible in the event of fire.
Sulphur oxides (SO_x)
 - **Protective equipment:**
Wear self-contained breathing apparatus.
Wear full protective suit.
 - **Additional information**
Ambient fire may liberate hazardous vapours.
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:**
Wear protective equipment. Keep unprotected persons away.
Avoid causing dust.
Use breathing protection against the effects of fumes/dust/aerosol.
 - **Measures for environmental protection:** Do not allow product to reach sewage system or water bodies.
 - **Measures for cleaning/collecting:**
Dispose of contaminated material as waste according to item 13.
Ensure adequate ventilation.
Collect mechanically.
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* 7 Handling and storage

- **Handling**
- **Information for safe handling:**
Prevent formation of dust.
Ensure good ventilation/exhaustion at the workplace.
Keep containers tightly sealed.
- **Information about protection against explosions and fires:** The product is not flammable
- **Storage**
- **Requirements to be met by storerooms and containers:** Store in cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Store under dry conditions.
Protect from humidity and keep away from water.

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Protect from the effects of light.

· **Storage class** Not required.

* 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:****1330-43-4 disodium tetraborate, anhydrous**OES (Great Britain) | Long-term value: 1 mg/m³· **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 and skin.

· **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.· **Recommended filter device for short term use:** Filter P2· **Protection of hands:**

Only use chemical-protective gloves with CE-labelling of category III.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

After use of gloves apply skin-cleaning agents and skin cosmetics.

· **Material of gloves**

Nitrile

nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**Value for the permeation: Level ≥ 6 (480 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.

* 9 Physical and chemical properties:

· Form:	Powder
· Colour:	White
· Odour:	Characteristic
· Melting point/Melting range:	Not determined
· Boiling point/Boiling range:	> 890°C
· Flash point:	Not applicable
· Self-inflammability:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive.
· Density	Not determined
· Solubility in / Miscibility with Water:	Soluble
· pH-value (10 g/l) at 20°C:	11

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· 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.
- **Dangerous reactions** No dangerous reactions known
- **Dangerous products of decomposition:**
Hydrogen sulphide
sodium monoxide
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:**

7757-82-6 sodium sulphate

Oral	LD50	5989 mg/kg (mouse)
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1330-43-4 disodium tetraborate, anhydrous

Oral	LD50	709 mg/kg (human)
		2660 mg/kg (rat)

65208-41-5 calcium thioglycollate trihydrate

Oral	LD50	352 mg/kg (rat)
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- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritant effect.
- **Sensitization:** Sensitization possible by skin contact.
- **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:
Irritant

* 12 Ecological information:

- **Information about elimination (persistence and degradability):**
- **Other information:** Quantitative data on the ecological effect of this product are not available.
- **Ecotoxic effects:**

· **Aquatic toxicity:**

7757-82-6 sodium sulphate

EC50	2564 mg/l/48h (Daphnia magna)
LC50	13500-14500 mg/l/96h (Pimephales promelas)

1330-43-4 disodium tetraborate, anhydrous

LC 50	807 mg/l (fish)
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- **Remark:**
lethal for fish:
sulphates > 7 g/l
- **Bacterial toxicity:** Sulphates toxic > 2.5 g/l
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

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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.

* 13 Disposal considerations

- **Product:**
- **Recommendation** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· 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

· ADR/GGVSE:

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· IMDG/GGVSee:

· EMS-Number:

· ICAO/ IATA:

- **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:**
Xi Irritant
- **Hazard-determining components of labelling:**
calcium thioglycollate trihydrate
- **Risk phrases:**
43 May cause sensitisation by skin contact.
- **Safety phrases:**
24/25 Avoid contact with skin and eyes.
37 Wear suitable gloves.
60 This material and its container must be disposed of as hazardous waste.

* 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.
43 May cause sensitisation by skin contact.
- **Department issuing data specification sheet:** Department TSS, Dr. Manfred Kaul
- **Data compared to the previous version altered.**