

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 HR2 F10)
- **Catalog number:** 251 407 **Model:** Mo-1 TP
- **Supplier:**
 WTW Wissenschaftlich-Technische Werkstätten GmbH
 Dr.-Karl-Slevogt-Straße 1
 D-82362 Weilheim Tel.: +49(0)881 183-0 Internet: <http://www.WTW.com>
 Fax: +49(0)881 183-420 Tel.: +49(0)881 183-100 E-Mail: Info@WTW.com
- **Emergency information:**
 Poison Center Berlin, Germany
 Tel.: +49(0)30 19240

* 2 Composition/Data on components:

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

· **Dangerous components:**

CAS: 7775-27-1	disodium peroxodisulphate	 Xn,  O; R 8-22-36/37/38-42/43	35-40%
EINECS: 231-892-1			

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

* 3 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" in the latest valid version.

R 22 Harmful if swallowed.

R 36/37/38 Irritating to eyes, respiratory system and skin.

R 42/43 May cause sensitisation by inhalation and 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.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

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- **After inhalation** Supply fresh air or oxygen; call for doctor.
- **After skin contact**
Instantly wash with water and soap and rinse thoroughly.
Seek medical treatment.
- **After eye contact**
Rinse opened eye for several minutes under running water.
Call a doctor immediately.
- **After swallowing**
Rinse out mouth and then drink plenty of water.
Call a doctor immediately.
- **The following symptoms may occur:**
after inhalation:
breathing difficulty
coughing
allergic reactions
after swallowing:
sickness
vomiting
mucous membrane irritation
headache
- **Danger**
Danger of pulmonary oedema.
risk of airways sensitization
risk of skin sensitization

* 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)
Oxygen (O₂)
Sodium monoxide
- **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.

* 6 Accidental release measures

- **Person-related safety precautions:**
Wear protective equipment. Keep unprotected persons away.
Use breathing protection against the effects of fumes/dust/aerosol.
Avoid causing dust.
Ensure adequate ventilation
- **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.
Collect mechanically.
Ensure adequate ventilation.

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* 7 Handling and storage

- **Handling**
- **Information for safe handling:**
 - Keep containers tightly sealed.
 - Prevent formation of dust.
 - Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** Protect from heat.
- **Storage**
- **Requirements to be met by storerooms and containers:** Store in cool location.
- **Information about storage in one common storage facility:** Store away from flammable substances.
- **Further information about storage conditions:**
 - Keep container tightly sealed.
 - Store under dry conditions.
 - Protect from humidity and keep away from water.
 - 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:**

7775-27-1 disodium peroxodisulphate

OES (Great Britain)	Long-term value: 1 mg/m ³ measured as [S2O8]
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- **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
 - 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 through 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 |

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· Odour:	Odourless
· Melting point/Melting range:	Not determined
· Boiling point/Boiling range:	Not applicable
· Flash point:	Not applicable
· Inflammability (solid, gaseous)	Product is not inflammable.
· Self-inflammability:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive.
· Density at 20°C	2.14 g/cm ³
· Solubility in / Miscibility with Water:	Soluble
· pH-value (10.8 g/l) at 20°C:	5.6
· 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:**
 - combustible substances
 - alcohols
 - reducing agents
- **Dangerous reactions**
 - Develops toxic gases / fumes
 - Develops corrosive gases / fumes
- **Dangerous products of decomposition:**
 - Sulphur oxides (SO_x)
 - 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)
7775-27-1 disodium peroxodisulphate		
Oral	LD50	930 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritant effect.
- **Sensitization:**
 - Sensitization possible by inhalation.
 - Sensitization possible by skin contact.
- **Subacute to chronic toxicity:**
 - CAS 7775-27-1:
 - MERCK: Sensitization test (guinea pig): positiv (OECD 406)

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· 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

* 12 Ecological information:

· Information about elimination (persistence and degradability):
· Other information:

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

Does not cause biological oxygen deficit.

· Ecotoxic effects:
· Aquatic toxicity:
7757-82-6 sodium sulphate

EC50 2564 mg/l/48h (Daphnia magna)

LC50 13500-14500 mg/l/96h (Pimephales promelas)

7775-27-1 disodium peroxodisulphate

EC50 133 mg/l/48h (Daphnia magna)

LC50 771 mg/l/96h (Onchorhynchus mykiss)

· Remark:

Toxic for fish:

sulphates > 7 g/l

Reacts with water to form toxic decomposition products.

(CAS 7775-27-1)

· Bacterial toxicity: Sulphates toxic > 2.5 g/l

· General notes:

Water hazard class 1 (German Regulation) (Self-assessment): 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.

* 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 07 discarded inorganic chemicals consisting of or containing dangerous substances

· 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:
· IMDG/GGVSee:
· EMS-Number:
· ICAO/IATA:

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· 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 peroxodisulphate

· Risk phrases:

22 Harmful if swallowed.

36/37/38 Irritating to eyes, respiratory system and skin.

42/43 May cause sensitisation by inhalation and skin contact.

· Safety phrases:

22 Do not breathe dust.

24 Avoid contact with skin.

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

37 Wear suitable gloves.

45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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.

36/37/38 Irritating to eyes, respiratory system and skin.

42/43 May cause sensitisation by inhalation and skin contact.

8 Contact with combustible material may cause fire.

· Department issuing data specification sheet: Department TSS, Dr. Manfred Kaul**· Data compared to the previous version altered.**

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