



Material Safety Data Sheet

According to 91/155 EEC

Printing date 30.05.2005

Reviewed on 30.05.2005

1 Identification of substance:

- **Product details:** Reagent for water analysis
- **Product name:** Molybdate No.2 HR
- **Catalog number:** 00513079, (4)513070, (4)513071
- **Supplier:**
Tintometer GmbH
Schleefstraße 8a-12
D - 44287 Dortmund
Made in Germany
- **Informing department:** Department Laboratory
- **Emergency information:**
Poison Center Berlin, Germany
phone: +49(0)30 19240

phone: +49(0)231 94510-0

* 2 Composition/Data on components:

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

Dangerous components:

CAS: 65208-41-5 EINECS: 249-881-5	calcium thioglycollate trihydrate	<input checked="" type="checkbox"/> Xn; R 22-37-43	10-20%
CAS: 124-04-9 EINECS: 204-673-3 EC Number: 607-144-00-9	adipic acid	<input checked="" type="checkbox"/> Xi; R 36	5-10%

- **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 37 Irritating to respiratory system.

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.
- **After inhalation** Supply fresh air and call for doctor for safety reasons.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly.

(Contd. on page 2)

— GB —

Material Safety Data Sheet

According to 91/155 EEC

Printing date 30.05.2005

Reviewed on 30.05.2005

Product name: Molybdate No.2 HR

(Contd. of page 1)

- **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.
Induce vomiting.
 - **The following symptoms may occur:**
after inhalation:
coughing
mucous membrane irritation
breathing difficulty
after swallowing:
irritation
gastric or intestinal trouble
sickness
vomiting
diarrhoea
 - **Danger** risk of skin sensitization
-
-

5 Fire fighting measures

- **Suitable extinguishing agents**
CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
 - **Special hazards caused by the material, its products of combustion or resulting gases:**
Formation of toxic gases is possible during heating or in case of fire.
Sulphur oxides (SO_x)
 - **Protective equipment:** Wear self-contained breathing apparatus.
 - **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.
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.
-
-

* 7 Handling and storage

- **Handling**
 - **Information for safe handling:** No special measures required.
 - **Information about protection against explosions and fires:** No special measures required.
 - **Storage**
 - **Requirements to be met by storerooms and containers:** Store in cool location.
 - **Information about storage in one common storage facility:** store away from solvents
 - **Further information about storage conditions:**
Protect from heat and direct sunlight.
Store under dry conditions.
Protect from humidity and keep away from water.
-
-

(Contd. on page 3)

Material Safety Data Sheet

According to 91/155 EEC

Printing date 30.05.2005

Reviewed on 30.05.2005

Product name: Molybdate No.2 HR

(Contd. of page 2)

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

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**

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

Value for the permeation: Level ≥ 6 (480 min)· **Eye protection:** Tightly sealed safety glasses.· **Body protection:** Protective work clothing.

9 Physical and chemical properties:

· Form:	Tablets
· Colour:	White
· Odour:	Unpleasant

· **Melting point/Melting range:** Not determined· **Boiling point/Boiling range:** 265°C· **Flash point:** $> 100^\circ\text{C}$ · **Ignition temperature:** 405°C· **Self-inflammability:** Product is not selfigniting.· **Danger of explosion:** Product is not explosive.· **Density** Not determined· **Solubility in / Miscibility with Water:** Soluble· **pH-value (8.6 g/l) at 20°C:** 8.3

(Contd. on page 4)

Material Safety Data Sheet

According to 91/155 EEC

Printing date 30.05.2005

Reviewed on 30.05.2005

Product name: Molybdate No.2 HR

(Contd. of page 3)

· Solvent content:	
Organic solvents:	0.0 %
· Solids content:	
	100.0 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** strong heating
- **Dangerous reactions** No dangerous reactions known
- **Dangerous products of decomposition:** 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:		
65208-41-5 calcium thioglycollate trihydrate		
Oral	LD50	352 mg/kg (rat)
10043-35-3 boric acid, crude natural, containing not more than 85 per cent of H3BO3 calculated on the dry weight		
Oral	LD50	2660 mg/kg (rat)
Dermal	LD50	> 2000 mg/kg (rat)
1330-43-4 disodium tetraborate, anhydrous		
Oral	LD50	709 mg/kg (human)
		2660 mg/kg (rat)
124-04-9 adipic acid		
Oral	LD50	5700 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritant effect.
- **Sensitization:** Sensitization possible by skin contact.
- **Subacute to chronic toxicity:**
CAS-No. 10043-35-3:
MERCK: Sensitization test (guinea pig): negative (OECD 406)
- **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.
CAS-No. 124-04-9: 100% / 28 d

· Behaviour in environmental systems:	
10043-35-3 boric acid, crude natural, containing not more than 85 per cent of H3BO3 calculated on the dry weight	
log P(o/w)	0.76 (25°C) (.)
124-04-9 adipic acid	
log P(o/w)	0.093 (25°C) (.)

(Contd. on page 5)

Material Safety Data Sheet

According to 91/155 EEC

Printing date 30.05.2005

Reviewed on 30.05.2005

Product name: Molybdate No.2 HR

(Contd. of page 4)

· Ecotoxicological effects:
· Aquatic toxicity:
10043-35-3 boric acid, crude natural, containing not more than 85 per cent of H₃BO₃ calculated on the dry weight

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

1330-43-4 disodium tetraborate, anhydrous

LC 50 | 807 mg/l (fish)

124-04-9 adipic acid

EC50 | 86 mg/l/48h (Daphnia magna)

LC50 | 511 mg/l/48h (Leuciscus idus)

97 mg/l/96h (Pimephales promelas)

· Additional ecological information:
· BSB5-value:
124-04-9 adipic acid

BSB5 | 0.598 g/g (-)

· 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 06 | laboratory chemicals, consisting of or containing dangerous 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.

14 Transport information

· Land transport ADR/RID (cross-border)
· ADR/RID-GGVS/E Class: -

· Maritime transport IMDG:
· IMDG Class: -

· Marine pollutant: No

· Air transport ICAO-TI and IATA-DGR:
· ICAO/IATA Class: -

· 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

(Contd. on page 6)

Material Safety Data Sheet

According to 91/155 EEC

Printing date 30.05.2005

Reviewed on 30.05.2005

Product name: Molybdate No.2 HR

(Contd. of page 5)

· Hazard-determining components of labelling:

calcium thioglycollate trihydrate

· Risk phrases:

37 Irritating to respiratory system.

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.

36 Irritating to eyes.

37 Irritating to respiratory system.

43 May cause sensitisation by skin contact.

· Department issuing data specification sheet: Technical Department**· * Data compared to the previous version altered.**