

Material Safety Data Sheet According to 91/155 EEC

Reviewed on 15.02.2006

* **1 Identification of substance:**

- **Product details:** Reagent for water analysis
- **Product name:** HR Set 10-150 mg/l Part 1/2 **(Total Nitrogen Reagent B)**
- **Catalog number:** 251 996 **Model: Ntot2 (HR)**
- **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
 phone: +49(0)30 19240

* **2 Composition/Data on components:**

- **Chemical characterization**
- **Description:** Preparation contains anorganic and organic compounds.

· Dangerous components:			
CAS: 7681-57-4	disodium disulphite	<input checked="" type="checkbox"/> Xn; R 22-31-41	5-10%
EINECS: 231-673-0			
EC Number: 016-063-00-2			

· **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 31 Contact with acids liberates toxic gas.
 R 41 Risk of serious damage to eyes.
- **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.
- **After skin contact**
 Instantly rinse with water.
 If skin irritation continues, consult a doctor.

Material Safety Data Sheet

According to 91/155 EEC

Reviewed on 15.02.2006

Product name: HR Set 10-150 mg/l Part 1/2 (Total Nitrogen Reagent B)

(Contd. of page 1)

- **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.
Seek immediate medical advice.
- **Information for doctor** Sulphites are strong sensitizers.
- **The following symptoms may occur:**
after swallowing:
diarrhoea
irritation
allergic reactions
after inhalation:
coughing
mucous membrane irritation
breathing difficulty

* 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:**
Formation of toxic gases is possible during heating or in case 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.

* 6 Accidental release measures

- **Person-related safety precautions:**
Put on breathing apparatus.
Wear protective equipment. Keep unprotected persons away.
Avoid causing dust.
- **Measures for environmental protection:** Do not allow product to reach sewage system or water bodies.
- **Measures for cleaning/collecting:**
Collect mechanically.
Ensure adequate ventilation.
Dispose of contaminated material as waste according to item 13.

* 7 Handling and storage

- **Handling**
- **Information for safe handling:** Ensure good ventilation/exhaustion at the workplace.
- **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:**
Do not store together with acids.
Store away from oxidizing agents.
- **Further information about storage conditions:**
Protect from heat and direct sunlight.

(Contd. on page 3)

Material Safety Data Sheet

According to 91/155 EEC

Reviewed on 15.02.2006

Product name: HR Set 10-150 mg/l Part 1/2 (Total Nitrogen Reagent B)

(Contd. of page 2)

Store under dry conditions.
Protect from humidity and keep away from water.
Protect from the effects of light.

* 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:**

7681-57-4 disodium disulphite

OES (Great Britain) Long-term value: 5 mg/m³

· **Additional information:** The lists that were valid during the compilation were used as basis.

· **Personal protective equipment**

· **General protective and hygienic measures**

Take off immediately all contaminated clothing
Wash hands during breaks and at the end of the work.
Avoid contact with the eyes.
Do not eat, drink or smoke while working.

· **Breathing equipment:** Use breathing protection 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**

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:	Crystalline powder
· Colour:	Whitish
· Odour:	Odourless
· Melting point/Melting range:	Not determined
· Boiling point/Boiling range:	Not determined
· Flash point:	Not applicable
· Danger of explosion:	Product is not explosive.
· Density	Not determined
· Solubility in / Miscibility with Water:	Partly soluble
· pH-value:	Not determined
· Solvent content:	
Organic solvents:	0.0 %
· Solids content:	100.0 %

— GB —

(Contd. on page 4)

Material Safety Data Sheet

According to 91/155 EEC

Reviewed on 15.02.2006

Product name: HR Set 10-150 mg/l Part 1/2 (Total Nitrogen Reagent B)

(Contd. of page 3)

*10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** strong heating
- **Materials to be avoided:**
 - acids
 - oxidizing agents
 - > forms heat
- **Dangerous reactions** Contact with acids releases toxic gases
- **Dangerous products of decomposition:**
 - carbon monoxide and carbon dioxide
 - Nitrogen oxides (NOx)
 - Sulphur oxides (SOx)
 - 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:**

57-13-6 urea		
Oral	LD50	8471 mg/kg (rat)
Dermal	LD50	8200 mg/kg (rat)
7681-57-4 disodium disulphite		
Oral	LD50	1540 mg/kg (rat)

- **Primary irritant effect:**
 - **on the skin:** Irritant to skin and mucous membranes.
 - **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:**
 - Sensitizing effect by inhalation is possible by prolonged exposure.
 - Sensitizing effect by skin contact is possible by prolonged exposure.
- **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. 57-13-6:
 - 96% / 16 d

· **Behaviour in environmental systems:**

57-13-6 urea	
log P(o/w)	-1.59 (.)

· **Ecotoxic effects:**

· **Aquatic toxicity:**

57-13-6 urea	
Daphnia EC50	> 10000 mg/l/24h (Daphnia magna)
LC50	> 6810 mg/l/96h (Leuciscus idus)
7681-57-4 disodium disulphite	
EC50	89 mg/l/48h (Daphnia magna)
LC50	150-220 mg/l/96h (Onchorhynchus mykiss)

(Contd. on page 5)

Material Safety Data Sheet

According to 91/155 EEC

Printing

Reviewed on 15.02.2006

Product name: HR Set 10-150 mg/l Part 1/2 (Total Nitrogen Reagent B)

(Contd. of page 4)

· **Remark:**

· **Algae toxicity:**

CAS No. 7681-57-4 Desmodesmus subspicatus IC50: 48mg/l/72 h

7681-57-4 disodium disulphite

IC50 | 48 mg/l/72h (Desmodesmus subspicatus)

· **Bacterial toxicity:**

CAS No. 7681-57-4 Pseudomonas putida EC50: 56 mg/l/17 h

7681-57-4 disodium disulphite

EC50 | 56 mg/l/17h (Pseudomonas putida)

· **Additional ecological information:**

· **COD-value:**

7681-57-4 disodium disulphite

COD | 0.168 g/g (.)

· **General notes:**

Water danger class 3 (German Regulation) (Self-assessment acc. VwVwS Annex 4): extremely hazardous for water.

Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into soil.

* 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

· **Risk phrases:**

31 Contact with acids liberates toxic gas.

(Contd. on page 6)

Material Safety Data Sheet

According to 91/155 EEC

Reviewed on 15.02.2006

Product name: HR Set 10-150 mg/l Part 1/2 (Total Nitrogen Reagent B)

(Contd. of page 5)

41 Risk of serious damage to eyes.

· Safety phrases:

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

39 Wear eye/face protection.

60 This material and its container must be disposed of as hazardous waste.

· National regulations**· Information about limitation of use:** Employment restrictions concerning young persons must be observed.

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.

31 Contact with acids liberates toxic gas.

41 Risk of serious damage to eyes.

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

— GB —