

Material Safety Data Sheet

According to 91/155 EEC

Reviewed on 23.02.2005

Product name: Ntot2 (HR) HR Set 10-150 mg/l Part 2/2 (Total N Hydroxide HR 10-150 mg/l; ppm)

(Contd. of page 1)

sickness
irritation
after inhalation:
coughing
mucous membrane irritation

* 5 Fire fighting measures

- **Suitable extinguishing agents** Use fire fighting measures that suit the environment.
- **Protective equipment:** Wear self-contained breathing apparatus.
- **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:** Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:** Do not allow product to reach sewage system or water bodies.
- **Measures for cleaning/collecting:**
neutralize with diluted sulphuric acid
Absorb with liquid-binding material (sand, diatomite, universal binders).

* 7 Handling and storage

- **Handling**
- **Information for safe handling:** Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Protect from heat.
The product is not flammable
- **Storage**
- **Requirements to be met by storerooms and containers:**
Unsuitable material for container: aluminium.
Store in cool location.
- **Information about storage in one common storage facility:** Not required.
- **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:**

1310-73-2 sodium hydroxide

OES (Great Britain) Short-term value: 2 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.

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Take off immediately all contaminated clothing

Wash hands during breaks and at the end of the work.

Do not inhale gases / fumes / aerosols.

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 B

· **Protection of hands:**

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.

· **Penetration time of glove material**

The exact break through 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:** Alkaline resistant protective clothing

* 9 Physical and chemical properties:

· Form:	Fluid
· Colour:	Colourless
· Odour:	Odourless
· Melting point/Melting range:	Not determined
· Boiling point/Boiling range:	$\sim 100^{\circ}\text{C}$
· Flash point:	Not applicable
· Danger of explosion:	Product is not explosive.
· Density at 20°C	1 g/cm ³
· Solubility in / Miscibility with Water:	Fully miscible
· pH-value at 20°C:	12.9
· Organic solvents:	0.0 %
· Water:	> 99 %

* 10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.

· **Materials to be avoided:**

acids

metals

· **Dangerous reactions**

Corrosive action on metals

Corrodes aluminium

Reacts with metals forming hydrogen

---> Explosive

· **Dangerous products of decomposition:**

ammonia

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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:**

1310-73-2 sodium hydroxide

Oral	LD50	2000 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:** No sensitizing effect known.

* 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 biocidal oxygen deficit.

· **Ecotoxic effects:**

· **Aquatic toxicity:**

1310-73-2 sodium hydroxide

LC 50	189 mg/l (fish)
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· **Remark:**

Forms corrosive mixtures with water even if diluted.

Toxic for fish:

Toxic for algae

· **General notes:**

Generally not hazardous for water.

Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms.

* 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
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· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleaning agent:** Water, if necessary with cleaning agent.

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*14 Transport information

· ADR/GGVSE: UN 3316 CHEMIE-TESTSATZ, 9, II

· IMDG/GGVSee: UN 3316 CHEMICAL KIT, 9, II; EMS-Number: F-A S-P

· ICAO/IATA: CHEMICAL KIT, 9, UN 3316, II

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*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:**

36/38 Irritating to eyes and skin.

· **Safety phrases:**

23 Do not breathe fumes/aerosol.

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

37 Wear suitable gloves.

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

· **National regulations**

· **Water hazard class:** Generally not hazardous for water.

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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**

35 Causes severe burns.

- **Department issuing data specification sheet:** Department TSS, Dr. Manfred Kaul

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

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