

Material Safety Data Sheet

According to 91/155 EEC

Reviewed on 23.02.2005

* 1 Identification of substance:

- **Product details:** Reagent for water analysis
- **Product name:** Ntot1 TC (LR) LR Set 0-25 mg/l Part 2/2 (Total N Hydroxide LR 0-25 mg/l; ppm)
- **Catalog number:** 251 995 **Model:** Ntot1 TC (LR)
- **Supplier:**
WTW Wissenschaftlich-Technische Werkstätten GmbH
Dr.-Karl-Slevogt-Straße 1
D-82362 Weilheim
Fax: +49(0)881 183-420
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- **Emergency information:**
Poison Center Berlin, Germany
Tel: +49(0)30 19240

* 2 Composition/Data on components:

- **Chemical characterization:** aqueous solution
- **Chemical characterization**

· Dangerous components:			
CAS: 1310-73-2	sodium hydroxide	 C; R 35	0.1-1.0%
EINECS: 215-185-5			
EC Number: 011-002-00-6			

- **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 36/38 Irritating to eyes and skin.
- **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.
- **After eye contact** Rinse opened eye for several minutes under running water. Then consult doctor.

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- **After swallowing**
Rinse out mouth and then drink plenty of water.
Seek medical treatment.
- **The following symptoms may occur:**
after inhalation:
coughing
mucous membrane irritation
breathing difficulty
after swallowing:
sickness
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).
- **Additional information:** See Section 13 for information on disposal.

* 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.
- **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.

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· **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.

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.

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 B

· **Protection of hands:**

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

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

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.

Recommended thickness of the material: ≥ 0.11 mm

· **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:** Protective work clothing.

* 9 Physical and chemical properties:

· Form:	Fluid
· Colour:	Colourless
· Odour:	Odourless
· Melting point/Melting range:	Not determined
· Boiling point/Boiling range:	100°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:	13
· 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

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- **Dangerous reactions**

Corrosive action on metals

Corrodes aluminium

Reacts with metals forming hydrogen

---> Explosive

- **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:**

1310-73-2 sodium hydroxide

Oral LD50 2000 mg/kg (rat)

- **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 biological oxygen deficit.

- **Ecotoxic effects:**

- **Aquatic toxicity:**

1310-73-2 sodium hydroxide

LC 50 189 mg/l (fish)

- **Remark:** Forms corrosive mixtures with water even if diluted.

- **General notes:**

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

- **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

* 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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