

Material Safety Data Sheet

According to 91/155 EEC

Reviewed on 16.02.2005

* 1 Identification of substance:

- **Product details:** Reagent for water analysis
- **Product name:** Ammonia Nitrogen Set (Vario Ammonia Cyanurate F10)
- **Catalog number:** 251 408 **Model:** NH4-1 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 the substances listed below with harmless additions.

· Dangerous components:

CAS: 1310-65-2 EINECS: 215-183-4	lithium hydroxide	 C; R 22-35	5-10%
CAS: 51580-86-0 EINECS: 220-767-7 EC Number: 613-030-01-7	sodium dichloroisocyanurate, dihydrate	 Xn,  N; R 22-31-36/37-50/53	≤ 2.5%

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

* 3 Hazards identification

- **Hazard designation:**



C Corrosive

- **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 35 Causes severe burns.

R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

- **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 or oxygen; call for doctor.

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In case of unconsciousness bring patient into stable side position for transport.

- **After skin contact**

Instantly rinse with water.

Instantly wash with polyethylene glycol 400.

Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing.

- **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.

Seek medical treatment.

- **The following symptoms may occur:**

after inhalation:

damage to the affected mucous membranes possible

after swallowing:

Strong caustic effect.

headache

sickness

vomiting

breathing difficulty

coughing

cramps

- **Danger**

Danger of system failure.

Danger of gastric perforation.

Danger of impaired breathing.

- **Treatment**

If swallowed or in case of vomiting, danger of entering the lungs

Subsequent observation for pneumonia and pulmonary oedema

* 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.

Nitrogen oxides (NO_x)

Hydrogen chloride (HCl)

- **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.

- **Measures for environmental protection:**

Do not allow product to reach sewage system or water bodies.

Inform respective authorities in case product reaches water or sewage system.

- **Measures for cleaning/collecting:**

neutralize with diluted sulphuric acid

Dispose of contaminated material as waste according to item 13.

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Ensure adequate ventilation.

* 7 Handling and storage

- **Handling**
- **Information for safe handling:**
 - Open and handle container with care.
 - Prevent formation of dust.
 - Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:**
 - Protect from heat.
 - 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:**
 - 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:**

1310-65-2 lithium hydroxide

OES (Great Britain)	Short-term value: 1 mg/m ³
	ILV

51580-86-0 sodium dichloroisocyanurate, dihydrate

MEL (Great Britain)	Short-term value: 0.07 mg/m ³
	Long-term value: 0.02 mg/m ³
	Sen; as -NCO

- **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:**
 - Alkaline resistant gloves
 - 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

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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 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:	Powder
· Colour:	White
· Odour:	Characteristic
· Melting point/Melting range:	Not determined
· Boiling point/Boiling range:	925°C
· Flash point:	Not applicable
· Self-inflammability:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive.
· Density	Not determined
· Solubility in / Miscibility with Water:	Soluble
· pH-value (40.4 g/l) at 20°C:	12.5
· 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:**

oxidizing agents

alkali metals

acids

· **Dangerous reactions**

Corrosive action on metals

Corrodes aluminium

Reacts with metals forming hydrogen

---> Explosive

· **Dangerous products of decomposition:**

Hydrogen chloride (HCl)

Chlorine compounds

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:**

7647-14-5 sodium chloride

Oral	LD50	3000 mg/kg (rat)
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Dermal	LD50	> 10000 mg/kg (rabbit)
1310-65-2 lithium hydroxide		
Oral	LD50	210 mg/kg (rat)
51580-86-0 sodium dichloroisocyanurate, dihydrate		
Oral	LD50	1400 mg/kg (rat)
Dermal	LD50	> 5000 mg/kg (rabbit)

· Primary irritant effect:
· on the skin: Strong caustic effect on skin and mucous membranes.

· on the eye: Strong caustic effect.

· Sensitization: No sensitizing effect known.

· Experience with humans:

Can cause liver damages.

Can cause kidney damages.

· 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:

Corrosive

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

* 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:
7647-14-5 sodium chloride

EC50 1000 mg/l/48h (Daphnia magna)

LC50 7650 mg/l/96h (Pimephales promelas)

· Remark:

Forms corrosive mixtures with water even if diluted.

Harmful to aquatic organisms

Harmful to fish

· Additional ecological information:

The following applies to lithium compounds in general:

MERCK - biological effects:

fish toxic from 100 mg/l up

Daphnia toxic from 16 mg/ up

plants toxic from 0.2 mg/l up (value calculated as Li)

· 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.

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.

Do not allow product to reach ground water, water bodies or sewage system.

* 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.

* 14 Transport information

· **ADR/GGVS:** 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:**
C Corrosive
- **Hazard-determining components of labelling:**
lithium hydroxide
- **Risk phrases:**
35 Causes severe burns.
52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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· Safety phrases:

- 20 When using do not eat or drink.
 - 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 - 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
 - 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.
 - 61 Avoid release to the environment. Refer to special instructions/safety data sheets.
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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

- 22 Harmful if swallowed.
- 31 Contact with acids liberates toxic gas.
- 35 Causes severe burns.
- 36/37 Irritating to eyes and respiratory system.
- 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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

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

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