



# Material Safety Data Sheet

## According to 91/155 EEC

Reviewed on 04.02.2005

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**Product name: Total Phosphate (Vario Sodium hydroxide 1.54N)**

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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.

· **The following symptoms may occur:**

after inhalation:

damage to the affected mucous membranes

coughing

breathing difficulty

after swallowing:

pain

Strong caustic effect.

· **Danger** Danger of gastric perforation.

· **Treatment** Subsequent observation for pneumonia and pulmonary oedema

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### \* 5 Fire fighting measures

· **Suitable extinguishing agents**

CO<sub>2</sub>, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

Use fire fighting measures that suit the environment.

· **Special hazards caused by the material, its products of combustion or resulting gases:**

Development of hazardous combustion gases or vapours possible in the event of fire.

· **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.

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### \* 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:**

Ensure adequate ventilation.

neutralize with diluted sulphuric acid

Absorb with liquid-binding material (sand, diatomite, universal binders).

Dispose of contaminated material as waste according to item 13.

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### \* 7 Handling and storage

· **Handling**

· **Information for safe handling:**

Open and handle container with care.

Prevent formation of aerosols.

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:** Store away from metals.

· **Further information about storage conditions:**

Keep container tightly sealed.

Store under dry conditions.

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- 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/m<sup>3</sup>

- **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:**

In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.

- **Recommended filter device for short term use:** Filter B

- **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.
- 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**

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.  
nitrile rubber, NBR  
Recommended thickness of the material:  $\geq 0.11$  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  $\geq 6$  (480 min)

- **Eye protection:** Tightly sealed safety glasses.

- **Body protection:** Alkaline resistant protective clothing

### \* 9 Physical and chemical properties:

- |                                       |                              |
|---------------------------------------|------------------------------|
| · <b>Form:</b>                        | Fluid                        |
| · <b>Colour:</b>                      | Colourless                   |
| · <b>Odour:</b>                       | Odourless                    |
| · <b>Melting point/Melting range:</b> | Not determined               |
| · <b>Boiling point/Boiling range:</b> | 100°C                        |
| · <b>Flash point:</b>                 | Not applicable               |
| · <b>Self-inflammability:</b>         | Product is not selfigniting. |
| · <b>Danger of explosion:</b>         | Product is not explosive.    |

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· <b>Density at 20°C</b>	1.068 g/cm <sup>3</sup>
· <b>Solubility in / Miscibility with Water:</b>	Fully miscible
· <b>pH-value at 20°C:</b>	13.3
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
<b>Water:</b>	> 90 %
· <b>Solids content:</b>	< 10 %

### \* 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:**
  - acids
  - metals
  - aluminium
  - zinc
  - NH<sub>x</sub>
- **Dangerous reactions**
  - Corrosive action on metals
  - Corrodes aluminium
  - Reacts with metals forming hydrogen
  - > Explosive
- **Dangerous products of decomposition:**
  - Hydrogen
  - ammonia
  - 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:** Strong caustic effect on skin and mucous membranes.
  - **on the eye:** Strong caustic effect.
- **Sensitization:** No sensitizing effect known.
- **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.
  - Methods for the determination of biodegradability are not applicable to inorganic substances.
  - Does not cause biological oxygen deficit.

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· **Ecotoxicological effects:**

· **Aquatic toxicity:**

**1310-73-2 sodium hydroxide**

LC 50 | 189 mg/l (fish)

· **Remark:**

Toxic for fish:

Forms corrosive mixtures with water even if diluted.

· **Remark:** neutralization possible

· **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. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

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 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.

### 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

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· 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:**

C Corrosive

· **Hazard-determining components of labelling:**

sodium hydroxide

· **Risk phrases:**

35 Causes severe burns.

· **Safety phrases:**

20 When using do not eat or drink.

23 Do not breathe fumes/aerosol.

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.

### 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.**