# Tintometer<sup>®</sup> Group Water Testing



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# Safety data sheet according to 1907/2006/EC, Article 31

Printing date 15.11.2023

Version number 19 (replaces version 18)

Revision: 15.11.2023

# SECTION 1: Identification of the substance/mixture and of the company/undertaking

- 1.1 Product identifier
- · Product name: Vario Sodium hydroxide 1.54N
- · Catalog number: 531530, 424448, 531530-0
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
- · Application of the substance / the preparation: Reagent for water analysis
- · 1.3 Details of the supplier of the safety data sheet
- Supplier: Tintometer GmbH Schleefstraße 8-12 44287 Dortmund Made in Germany www.lovibond.com

The Tintometer Limited Lovibond<sup>®</sup>House Sun Rise Way Amesbury Wiltshire SP4 7GR United Kingdom

- Informing department: e-mail: sds@lovibond.com Product Safety Department
- **1.4 Emergency telephone number:** +44 1235 239670 Languages: English

# **SECTION 2: Hazards identification**

· 2.1 Classification of the substance or mixture

## Classification according to Regulation (EC) No 1272/2008



GHS05 corrosion

Met. Corr.1 H290 May be corrosive to metals.

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

#### 2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

- The product is classified and labelled according to the GB CLP regulation.
- · Hazard pictograms



• Signal word Danger

- Hazard-determining components of labelling:
- sodium hydroxide • Hazard statements
- H290 May be corrosive to metals.

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H314 Causes severe skin burns ar	id eye damage.	
Precautionary statements     P280     Wear protective	gloves/protective clothing/eye protection.	
P303+P361+P353 IF ON SKIN (or	hair): Take off immediately all contaminated clothing. Rinse skin with water or showe	r
	emove person to fresh air and keep comfortable for breathing.	
	nse cautiously with water for several minutes. Remove contact lenses, if present and	easy to
do. Continue rir		-
	oncerned: Get medical advice/attention.	
	to prevent material damage.	
· 2.3 Other hazards Acid burns hav	e to treated immediately, as it may otherwise cause badly curing wounds.	
Results of PBT and vPvB assess	ment	
	substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or ve	
	e (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/20	006.
• Determination of endocrine-dism	tances with endocrine disrupting properties.	
SECTION 3: Composition/i	nformation on ingredients	
· · · · · ·		
3.2 Mixtures		
Description: aqueous solution		
Dangerous components:		
CAS: 1310-73-2	sodium hydroxide	5–10%
EINECS: 215-185-5 Index No: 011-002-00-6	♦ Met. Corr.1, H290; Skin Corr. 1A, H314 Specific concentration limits: Skin Corr. 1A; H314: C ≥ 5 %	
Reg.nr.: 01-2119457892-27-XXXX	Skin Corr. 1B; H314: 2 % ≤ C < 5 %	
	Skin Irrit. 2; H315: 0.5 % ≤ C < 2 %	
	Eye Irrit. 2; H319: 0.5 % ≤ C < 2 %	
· Additional information For the wo	ording of the listed hazard phrases refer to section 16.	
	•	
SECTION 4: First aid meas	ures	
. 4.1 Description of first aid mass	1500	
• 4.1 Description of first aid measured General information Instantly rem	nove any clothing soiled by the product.	
· After inhalation		
Supply fresh air.		
Call a doctor immediately.		
After skin contact		
Instantly wash with polyethylene gl	ycol 400.	
Instantly rinse with water.	ssary. Failure to treat burns can prevent wounds from healing.	
· After eye contact	ssary. Failure to treat burns can prevent woulds from healing.	
	tes (at least 15 min) under running water.	
Call a doctor immediately.	( 3	
After swallowing		
Rinse out mouth and then drink 1-2		
Do not induce vomiting; instantly ca		
• 4.2 Most important symptoms ar burns	nd effects, both acute and delayed:	
after inhalation:		
coughing		
breathing difficulty		
damage to the affected mucous me	embranes	
after swallowing:		
strong caustic effect.		
pain • <b>4 3 Indication of any immediate</b>	nedical attention and special treatment needed:	
If swallowed or in case of vomiting,		
Subsequent observation for pneum		
		GB —

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# **SECTION 5: Firefighting measures**

- · 5.1 Extinguishing media
- Suitable extinguishing agents Use fire fighting measures that suit the environment.
- 5.2 Special hazards arising from the substance or mixture
- The product is not combustible.
- Formation of toxic gases is possible during heating or in case of fire.
- 5.3 Advice for firefighters
- Protective equipment:
- Wear self-contained breathing apparatus. Wear full protective suit.
- Additional information
- Collect contaminated fire fighting water separately. It must not enter drains.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

Ambient fire may liberate hazardous vapours.

# **SECTION 6: Accidental release measures**

- · 6.1 Personal precautions, protective equipment and emergency procedures
- Advice for non-emergency personnel:

Wear protective equipment. Keep unprotected persons away.

Avoid substance contact.

Ensure adequate ventilation

Use breathing protection against the effects of fumes/dust/aerosol.

- Advice for emergency responders: Protective equipment: see section 8
- 6.2 Environmental precautions: Do not allow product to reach sewage system or water bodies.
- · 6.3 Methods and material for containment and cleaning up:

Ensure adequate ventilation.

Use neutralising agent.

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

Dispose of contaminated material as waste according to item 13.

6.4 Reference to other sections

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

# **SECTION 7: Handling and storage**

- · 7.1 Precautions for safe handling
- · Advice on safe handling: No special precautions necessary if used correctly.
- · Hygiene measures:
- Do not inhale gases / fumes / aerosols.
- Do not get in eyes, on skin, or on clothing.
- Take off immediately all contaminated clothing.

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

Do not eat, drink or smoke when using this product.

- 7.2 Conditions for safe storage, including any incompatibilities
- Requirements to be met by storerooms and containers:
- Store in cool location.
- Keep only in original packaging.
- Information about storage in one common storage facility:
- Store away from metals. Do not store together with acids.
- Further information about storage conditions:
- Protect from heat and direct sunlight.
- Protect from the effects of light.
- Protect from humidity and keep away from water.
- · Recommended storage temperature: 20°C +/- 5°C
- 7.3 Specific end use(s) No further relevant information available.

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# **SECTION 8: Exposure controls/personal protection**

#### 8.1 Control parameters

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#### · Components with limit values that require monitoring at the workplace:

CAS: 1310-73-2 sodium hydroxide

WEL (Great Britain) Short-term value: 2 mg/m<sup>3</sup>

· Regulatory information WEL (Great Britain): EH40/2020

#### · DNELs

#### Derived No Effect Level (DNEL)

# CAS: 1310-73-2 sodium hydroxide

Inhalative DNEL 1 mg/m<sup>3</sup> (Worker / long-term / local effects)

1 mg/m<sup>3</sup> (Consumer / long-term / local effects)

#### Recommended monitoring procedures:

Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.

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

#### · 8.2 Exposure controls

· Engineering measures:

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See item 7.

#### · Individual protection measures, such as personal protective equipment

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.

- · Eye/face protection Tightly sealed safety glasses.
- Hand protection Alkaline resistant gloves 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:  $\geq 0.11$  mm

- Penetration time of glove material
- Value for the permeation: Level = 1 (< 10 min)
- The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
- Other skin protection (body protection): Protective work clothing.
- · Breathing equipment: Use breathing protection against the effects of fumes/dust/aerosol.
- Recommended filter device for short term use: Filter P2

· Environmental exposure controls Do not allow product to reach sewage system or water bodies.

#### **SECTION 9: Physical and chemical properties**

· 9.1 Information on basic physical and che	emical properties	
Physical state	Fluid	
· Form:	Fluid	
· Colour:	Colourless	
· Odour:	Odourless	
· Odour threshold:	Not applicable.	
· Melting point/Freezing point:	Not determined.	
· Boiling point or initial boiling point and b	oiling range Not determined.	
Flammability	Not applicable.	
Explosive properties:	Product is not explosive.	
Lower and upper explosion limit		
Lower:	Not applicable.	
Upper:	Not applicable.	
Flash point:	Not applicable.	
Auto-ignition temperature:	Not applicable.	
Decomposition temperature:	Not applicable.	
pH at 20°C	~13.5	

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	(Contd. of page
Kinematic viscosity	Not determined.
Solubility	
Water:	Fully miscible
Partition coefficient n-octanol/water (log value)	Not applicable (mixture).
Vapour pressure:	Not determined.
Density and/or relative density	
Density at 20°C:	1.07 g/cm <sup>3</sup>
Relative density:	Not determined.
Relative gas density	Not determined.
Particle characteristics	Not applicable (liquid).
9.2 Other information	
Information with regard to physical hazard classes	
Corrosive to metals	May be corrosive to metals.
Metals that are corroded by the substance or mixture	Information on incompatible materials can be found in Sections 7 an
······································	10.
Other safety characteristics	
Oxidising properties:	none
Additional information	
Solids content:	< 10 %
Solvent content:	
Organic solvents:	0.0 %
Water:	> 90 %

# **SECTION 10: Stability and reactivity**

- · 10.1 Reactivity see section 10.3
- · 10.2 Chemical stability Stable at ambient temperature (room temperature).
- 10.3 Possibility of hazardous reactions
- Reacts with metals forming hydrogen (Danger of explosion in case of large amounts!)
- Corrosive action on metals
- Corrodes aluminium
- Exothermic reaction with acids
- 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials:
- metals
- light metals organic substances aluminium
- zinc
- 10.6 Hazardous decomposition products: see section 5

# **SECTION 11: Toxicological information**

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

· Acute toxicity Based on available data, the classification criteria are not met.		
· LD/LC50 values that are relevant for classification:		
CAS: 1310-73-2 sodium hydroxide		
Oral LDLo 500 mg/kg (rabbit) (IUCLID)		
<ul> <li>Skin corrosion/irritation Causes severe skin burns and eye damage.</li> <li>Serious eye damage/irritation Causes serious eye damage. Risk of blindness!</li> </ul>		

· Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

Information on components:

CAS: 1310-73-2 sodium hydroxide

Sensitisation Patch test (human) (negative)

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(Contd. of page 5) · Germ cell mutagenicity Based on available data, the classification criteria are not met. · Carcinogenicity Based on available data, the classification criteria are not met. · Reproductive toxicity Based on available data, the classification criteria are not met. • STOT (specific target organ toxicity) -single exposure Based on available data, the classification criteria are not met. • STOT (specific target organ toxicity) -repeated exposure Based on available data, the classification criteria are not met. · Aspiration hazard Based on available data, the classification criteria are not met. · Information on likely routes of exposure In the workplace, sodium hydroxide can be inhaled in the form of dusts or as a liquid aerosol. Due to the pronounced irritant effect (warning effect), prolonged massive exposures are generally avoided. In case of accidental ingestion of dust or swallowing of solution, rapid penetration of the alkali or Na and OH ions into the contacted tissues and partial transfer into the blood is to be expected. Even if NaOH comes into contact with the skin as a solid, it will act as a concentrated solution due to its hygroscopicity through rapid water absorption. The most frequent causes of accidents in occupational handling are accidental direct contact with eves and skin. Additional toxicological information: Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach. CAS: 1310-73-2 sodium hydroxide (source: GESTIS) Main toxic effects: Acute: strong irritation and caustic effect on all contacted mucous membranes and the skin, risk of irreversible eye damage (risk of blindness) Chronic: Irritant effect on eyes, respiratory tract and skin

Further information:

Irrespective of the route of exposure, the focus is on the local effect, which is characterized by swelling and dissolution of the contacted tissue (colliquation necrosis) that progresses rapidly in depth.

The extent of the tissue damage essentially depends on the duration of exposure, concentration, pH value, dose and onset of treatment measures.

#### · 11.2 Information on other hazards

• Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties.

Other information

According to the information available to us, the chemical, physical and toxicological properties of the substances mentioned in Chapter 3 have not been thoroughly investigated.

# **SECTION 12: Ecological information**

#### 12.1 Toxicity

# · Aquatic toxicity:

# CAS: 1310-73-2 sodium hydroxide

LC50 40.4 mg/l/48h (Ceriodaphnia sp.) (ECHA)

# · Bacterial toxicity:

# CAS: 1310-73-2 sodium hydroxide

EC50 22 mg/l (Photobacterium phosphoreum) (15 min)

#### 12.2 Persistence and degradability .

- · Other information:
- Mixture of inorganic compounds.
- Methods for the determination of biodegradability are not applicable to inorganic substances.
- · 12.3 Bioaccumulative potential No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

• 12.6 Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties.

12.7 Other adverse effects

Harmful effect due to pH shift.

Forms corrosive mixtures with water even if diluted.

Neutralisation possible in waste water treatment plants.

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Avoid transfer into the environment.

· Water hazard:

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 unneutralised.

# **SECTION 13: Disposal considerations**

· 13.1 Waste treatment methods

· Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Hand over to disposers of hazardous waste.

European waste catalogue

16 05 07\* discarded inorganic chemicals consisting of or containing hazardous substances

· Uncleaned packagings:

• Recommendation: Disposal must be made according to official regulations.

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

SECTION 14: Transport informatio	n	
· 14.1 UN number or ID number		
· ADR, IMDG, IATA	UN1824	
• 14.2 UN proper shipping name		
ADR	1824 SODIUM HYDROXIDE SOLUTION	
· IMDG, IATA	SODIUM HYDROXIDE SOLUTION	
<ul> <li>14.3 Transport hazard class(es)</li> </ul>		
· ADR		
2 Alexandree and a second seco		
· Class	8 (C5) Corrosive substances.	
· Label	8	
· IMDG, IATA		
· Class	8 Corrosive substances.	
Label	8	
· 14.4 Packing group		
· ADR, IMDG, IATA	II	
· 14.5 Environmental hazards:	Not applicable.	
• 14.6 Special precautions for user	Warning: Corrosive substances.	
· Kemler Number:	80	
· EMS Number:	F-A,S-B	
· Segregation groups	(SGG18) Alkalis	
Stowage Category	A	
· Segregation Code	SG35 Stow "separated from" SGG1-acids	
· 14.7 Maritime transport in bulk according		
instruments	Not applicable.	
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· Transport/Additional information:		
· ADR · Limited quantities (LQ)	1L	
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml	
<ul> <li>Transport category</li> <li>Tunnel restriction code</li> </ul>	2 E	
<ul> <li>IMDG</li> <li>Limited quantities (LQ)</li> <li>Excepted quantities (EQ)</li> </ul>	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml	

# **SECTION 15: Regulatory information**

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

- · Poisons Act UK Regulated explosives precursors None of the ingredients is listed. Regulated poisons None of the ingredients is listed. · Reportable explosives precursors None of the ingredients is listed. Reportable poisons The concentration of the substance is less than the stated mass percentage and is therefore of no concern: CAS: 1310-73-2 sodium hydroxide 12% of total caustic alkalinity · Regulation (EU) 2019/1148 on the marketing and use of explosives precursors not regulated Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (PIC) None of the ingredients is listed. Regulation (EC) No 1334/2000 setting up a Community regime for the control of exports of dual-use items and technology: None of the ingredients is listed. Regulation (EC) No 273/2004 on drug precursors None of the ingredients is listed. Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors None of the ingredients is listed. Regulation (EC) No 1005/2009 on substances that deplete the ozone layer: None of the ingredients is listed. REGULATION (EU) 2019/1021 on persistent organic pollutants (POP) None of the ingredients is listed. · LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV) None of the ingredients is listed. · Substances of very high concern (SVHC) according to REACH, Article 57
  - This product does not contain any substances of very high concern above the legal concentration limit of  $\ge 0.1\%$  (w / w). Substances of very high concern (SVHC) according to UK REACH
  - This product does not contain any substances of very high concern above the legal concentration limit of  $\ge 0.1\%$  (w / w).
  - · Directive 2012/18/EU (SEVESO III):
  - $\cdot$  Named dangerous substances ANNEX I None of the ingredients is listed.
  - · REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
  - · Information about limitation of use: Employment restrictions concerning young persons must be observed (94/33/EC).

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· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

## **SECTION 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. This Safety Data Sheets is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU)

This Safety Data Sheets is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

· Training hints Provide adequate information, instruction and training for operators.

#### Relevant phrases

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H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage.

#### Abbreviations and acronyms: OECD: Organisation for Economic Co-operation and Development

STOT: specific target organ toxicity SE: single exposure RE: repeated exposure EC50: half maximal effective concentration IC50: half maximal inhibitory concentration NOEL or NOEC: No Observed Effect Level or Concentration ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road) RID: Redement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association GHS: Globally Harmonised System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) DNEL: Derived No-Effect Level (UK REACH) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic SVHC: Substances of Very High Concern vPvB: very Persistent and very Bioaccumulative Met. Corr.1: Corrosive to metals – Category 1 Skin Corr. 1A: Skin corrosion/irritation - Category 1A Eye Dam. 1: Serious eye damage/eye irritation - Category 1

#### · Sources

Data arise from safety data sheets, reference works and literature. IUCLID (International Uniform Chemical Information Database) ECHA: European CHemicals Agency http://echa.europa.eu GESTIS- Stoffdatenbank (Substance Database, Germany)

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