

### Safety Data Sheet acc. to OSHA HCS (HazCom 2012)

Printing date 07/31/2018

Reviewed on 07/31/2018

#### 1 Identification

- **Product identifier**
- **Trade name:** **KS439 - 0.1N Sodium Hydroxide**
- **Catalogue number:**  
56Z043998, 56L043995, 56U043995, 56L043965, 56U043965, 56L043973, 56L043999, 56U043999, 56U043973
- **Application of the substance / the mixture:** Reagent for water analysis
- **Manufacturer/Supplier:**  
Tintometer Inc.  
6456 Parkland Drive  
Sarasota, FL 34243  
USA  
phone: (941) 756-6410  
fax: (941) 727-9654  
www.lovibond.us  
Made in Germany
- **Emergency telephone number:** + 1 866 928 0789 (English, French, Spanish)

#### 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS05 Corrosion

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

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Hazard Communication Standard (HCS).
- **Hazard pictograms**



GHS05

- **Signal word** Warning
- **Hazard statements**  
H290 May be corrosive to metals.
- **Precautionary statements**  
P234 Keep only in original container.  
P390 Absorb spillage to prevent material damage.
- **Other hazards** No further relevant information available.

#### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** aqueous solution
- **Composition and Information on Ingredients:** Percent ranges are used due to the confidential product information.
- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

#### 4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.

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- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**  
Rinse opened eye for several minutes (at least 15 min) under running water. If symptoms persist, consult a doctor.
- **After swallowing:**  
Rinse out mouth and then drink 1-2 glasses of water.  
If symptoms persist consult doctor.
- **Most important symptoms and effects, both acute and delayed irritations**
- **Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **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.
- **Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.
- **Additional information**  
Collect contaminated fire fighting water separately. It must not enter the sewage system.  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.  
Ambient fire may liberate hazardous vapours.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Advice for non-emergency personnel:**  
Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation
- **Advice for emergency responders:** Protective equipment: see section 8
- **Environmental precautions:**  
Do not allow product to reach sewage system or any water course.  
Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**  
Ensure adequate ventilation.  
Use neutralizing agent.  
Absorb with liquid-binding material (sand, diatomite, universal binders).  
Dispose contaminated material as waste according to item 13.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### 7 Handling and storage

- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Advice on safe handling:** No special precautions are necessary if used correctly.
- **Hygiene measures:**  
Take off immediately all contaminated clothing.  
Wash hands before breaks and at the end of work.  
Do not eat, drink or smoke when using this product.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Store away from metals.
- **Further information about storage conditions:**  
Protect from heat and direct sunlight.

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Protect from exposure to the light.

Protect from humidity and water.

- **Recommended storage temperature:** 20°C +/- 5°C (approx. 68°F)
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Engineering measures:**  
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.  
See item 7.
- **Personal protective equipment:**
- **Breathing equipment:**  
Not required.  
Use respiratory protective device against the effects of fumes/dust/aerosol.
- **Recommended filter device for short term use:** Filter B
- **Protection of hands:**  
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  $\leq 1$  (10 min)  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**  
Safety glasses  
use against the effects of fumes / dust
- **Body protection:** Protective work clothing
- **Limitation and supervision of exposure into the environment:**  
Do not allow product to reach sewage system or any water course.

## 9 Physical and chemical properties

· <b>Information on basic physical and chemical properties</b>	
· <b>Appearance:</b>	
Form / Physical state:	Fluid
Color:	Colorless
· <b>Odor:</b> Odorless	
· <b>Odor threshold:</b> Not determined.	
· <b>pH-value at 20°C (68°F):</b> 12	
· <b>Melting point/freezing point:</b> Not applicable.	
· <b>Initial boiling point and boiling range:</b> 100°C (212°F)	
· <b>Flash point:</b> Not applicable.	
· <b>Flammability (solid, gas):</b> Not applicable.	
· <b>Ignition temperature:</b> Not determined.	
· <b>Decomposition temperature:</b> Not determined.	
· <b>Auto-ignition temperature:</b> Product is not self-igniting.	
· <b>Danger of explosion:</b> Product does not present an explosion hazard.	
· <b>Flammability or explosive limits:</b>	
Lower:	Not determined.
Upper:	Not determined.

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· <b>Oxidizing properties:</b>	none
· <b>Vapor Pressure at 20°C (68°F):</b>	23 hPa (17.3 mm Hg)
· <b>Density at 20°C (68°F):</b>	1 g/cm <sup>3</sup> (8.35 lbs/gal)
· <b>Relative density:</b>	Not determined.
· <b>Vapor density:</b>	Not determined.
· <b>Evaporation rate:</b>	Not determined.
· <b>Solubility(ies)</b> <b>Water:</b>	Fully miscible.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	Not determined.
· <b>Dynamic:</b>	Not determined.
· <b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b> <b>Organic solvents:</b>	0.0 %
<b>Water:</b>	> 99 %
<b>Solids content:</b>	< 1 %
· <b>Other information</b>	.
· <b>Corrosion Rate of Metal:</b> <b>aluminum:</b>	20,2 mm/a

## 10 Stability and reactivity

- **Reactivity** see section "Possibility of hazardous reactions"
- **Chemical stability** Stable at ambient temperature (room temperature).
- **Possibility of hazardous reactions**
  - Corrosive action on metals.
  - Corrodes aluminium and zinc.
  - Exothermic reaction with acids.
  - Violent reactions possible with:
    - The generally known reaction partners of water.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:**
  - light metals
  - aluminum
  - zinc
- **Hazardous decomposition products:** see section 5

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
  - **on the skin:** No irritant effect.
  - **on the eye:** Based on available data, the classification criteria are not met.
- **Information on components:** CAS 1310-73-2: chronic: dermatitis
- **Sensitization:** No sensitizing effects known.
- **Carcinogenic categories**

### · IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

### · NTP (National Toxicology Program)

None of the ingredients is listed.

### · OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

- **Other information:** see section 8 / 15

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- **Synergistic Products:** None
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):** The following statements refer to the mixture:
- **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.


## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability .**
- **Other information:**  
Mixture of inorganic compounds.  
Quantitative data on the ecological effect of this mixture are not available.  
The following statements refer to the individual components.  
Does not cause biological oxygen deficit.  
Methods for the determination of biodegradability are not applicable to inorganic substances.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Other adverse effects** Avoid transfer into the environment.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
Hand over to hazardous waste disposers.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## \*14 Transport information

<ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, IMDG, IATA</b></li> </ul>	UN1824
<ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT</b></li> <li>· <b>IMDG, IATA</b></li> </ul>	Sodium hydroxide solution SODIUM HYDROXIDE SOLUTION
<ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT</b></li> </ul>	<div style="text-align: center;">  </div>
<ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>	8 Corrosive substances 8

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<ul style="list-style-type: none"> <li>· <b>IMDG, IATA</b></li> </ul>	
	
<ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>	8 Corrosive substances 8
<ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>DOT, IMDG, IATA</b></li> </ul>	III
<ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> <li>· <b>Marine pollutant:</b></li> </ul>	No
<ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> <li>· <b>Danger code (Kemler):</b></li> <li>· <b>EMS Number:</b></li> <li>· <b>Segregation groups</b></li> <li>· <b>Stowage Category</b></li> <li>· <b>Segregation Code</b></li> </ul>	Warning: Corrosive substances 80 F-A,S-B Alkalis A SG35 Stow "separated from" acids.
<ul style="list-style-type: none"> <li>· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b></li> </ul>	Not applicable.
<ul style="list-style-type: none"> <li>· <b>Transport/Additional information:</b></li> <li>· <b>DOT</b></li> <li>· <b>Quantity limitations</b></li> <li>· <b>Limited quantity (LQ):</b></li> <li>· <b>Excepted quantities (EQ)</b></li> </ul>	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L 5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
<ul style="list-style-type: none"> <li>· <b>IMDG</b></li> <li>· <b>Limited quantities (LQ)</b></li> <li>· <b>Excepted quantities (EQ)</b></li> </ul>	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

## 15 Regulatory information

<ul style="list-style-type: none"> <li>· <b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b></li> <li>· <b>Sara</b></li> </ul>
<ul style="list-style-type: none"> <li>· <b>Section 355 (Extremely hazardous substances):</b></li> </ul> None of the ingredients is listed.
<ul style="list-style-type: none"> <li>· <b>Section 313 (Specific toxic chemical listings):</b></li> </ul> None of the ingredients is listed.
<ul style="list-style-type: none"> <li>· <b>TSCA (Toxic Substances Control Act):</b></li> </ul> All ingredients are listed.
<ul style="list-style-type: none"> <li>· <b>Proposition 65</b></li> </ul>
<ul style="list-style-type: none"> <li>· <b>Chemicals known to cause cancer:</b></li> </ul> None of the ingredients is listed.
<ul style="list-style-type: none"> <li>· <b>Chemicals known to cause reproductive toxicity for females:</b></li> </ul> None of the ingredients is listed.
<ul style="list-style-type: none"> <li>· <b>Chemicals known to cause reproductive toxicity for males:</b></li> </ul> None of the ingredients is listed.
<ul style="list-style-type: none"> <li>· <b>Chemicals known to cause developmental toxicity:</b></li> </ul> None of the ingredients is listed.

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<b>· New Jersey Right-to-Know List:</b>	
CAS: 1310-73-2	sodium hydroxide
<b>· New Jersey Special Hazardous Substance List:</b>	
CAS: 1310-73-2	sodium hydroxide
	CO, R1
<b>· Pennsylvania Right-to-Know List:</b>	
CAS: 1310-73-2	sodium hydroxide
<b>· Pennsylvania Special Hazardous Substance List:</b>	
CAS: 1310-73-2	sodium hydroxide
	E
<b>· EPA (Environmental Protection Agency)</b>	
None of the ingredients is listed.	
<b>· NIOSH-Ca (National Institute for Occupational Safety and Health)</b>	
None of the ingredients is listed.	

· **Information about limitation of use:** Employment restrictions concerning young persons must be observed.

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

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Date of preparation / last revision** 07/31/2018 / 2

· **Abbreviations and acronyms:**

EC50: effective concentration, 50 percent (in vivo)

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

ACGIH® - American Conference of Governmental Industrial Hygienists

•A1 - Confirmed human carcinogen

•A2 - Suspected human carcinogen

•A3 - Confirmed animal carcinogen with unknown relevance to humans

•A4 - Not classifiable as a human carcinogen

•A5 - Not suspected as a human carcinogen

IARC - International Agency for Research on Cancer

•Group 1 - Carcinogenic to humans

•Group 2A - Probably carcinogenic to humans

•Group 2B - Possibly carcinogenic to humans

•Group 3 - Not classifiable as to carcinogenicity to humans

•Group 4 - Probably not carcinogenic to humans

NTP - National Toxicology Program, U.S. Department of Health and Human Services

•Group K - Known to be Human Carcinogens

•Group R - Reasonably Anticipated to be Human Carcinogens

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement 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

DOT: US Department of Transportation

IATA: International Air Transport Association

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)

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Met. Corr. 1: Corrosive to metals – Category 1

· **Sources** Data arise from safety data sheets, reference works and literature.

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