



**Be Right™**

# SAFETY DATA SHEET

This safety data sheet complies with the requirements of:  
SS586: 2008 (2014)

**Issue Date** 18-10-2016

**Revision Date** 28-Mar-2023

**Version** 1.2

## Section 1: IDENTIFICATION

### Product identifier

**Product Name** Sodium Hydroxide Solution 0.020N

### Other means of identification

**Product Code(s)** 19353

**Proper shipping name** Not regulated

**Safety data sheet number** M00766

**Pure substance/mixture** Mixture

### Recommended use of the chemical and restrictions on use

**Recommended Use** Standard solution.

**Uses advised against** No information available

### Details of the supplier of the safety data sheet

#### Manufacturer Address

Hach Company, P.O.Box 389, Loveland,  
CO 80539, USA, +1(970) 669-3050

#### Supplier

HACH SEA Headquarters,  
1 Science Park Road, #05-09, East Wing, The Capricorn, Singapore Science Park II,  
Singapore 117528, TEL (65) – 62659381

### Emergency telephone number

Chemtrec 1-800-424-9300

## Section 2: HAZARDS IDENTIFICATION

### Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A

### Hazards not otherwise classified (HNOC)

Not applicable

### Label elements

**Signal word** - Warning



#### **Hazard statements**

H315 - Causes skin irritation  
H319 - Causes serious eye irritation

#### **Precautionary statements**

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
P332 + P313 - If skin irritation occurs: Get medical attention  
P362 - Take off contaminated clothing and wash before reuse  
P280 - Wear protective gloves, protective clothing, eye protection, and face protection  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P337 + P313 - If eye irritation persists: Get medical attention

#### **Other Hazards Known**

None

### **Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**

#### **Substance**

Not applicable

#### **Mixture**

Chemical name	Formula	EC No (EU Index No)	CAS No	Percent Range
Sodium hydroxide	NaOH	(011-002-00-6) 215-185-5	1310-73-2	<1%

### **Section 4: FIRST AID MEASURES**

#### **Description of first aid measures**

<b>General advice</b>	Show this safety data sheet to the doctor in attendance.
<b>Inhalation</b>	Remove to fresh air. Get medical attention immediately if symptoms occur.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. Do not rub affected area.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.

**Self-protection of the first aider** Avoid contact with skin, eyes or clothing.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Burning sensation.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

## Section 5: FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** Caution: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the chemical** No information available.

**Hazardous combustion products** This material will not burn.

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## Section 6: ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required.

**Other Information** Refer to protective measures listed in Sections 7 and 8.

**Environmental precautions**

**Environmental precautions** Prevent further leakage or spillage if safe to do so.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Pick up and transfer to properly labeled containers.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## Section 7: HANDLING AND STORAGE

**Precautions for safe handling**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

**Conditions for safe storage, including any incompatibilities**

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**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### Occupational exposure limits

Chemical name	Singapore	OSHA PEL	ACGIH TLV	NIOSH
Sodium hydroxide (<1%) CAS#: 1310-73-2	STEL: 2 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup> (vacated) Ceiling: 2 mg/m <sup>3</sup>	Ceiling: 2 mg/m <sup>3</sup>	IDLH: 10 mg/m <sup>3</sup> Ceiling: 2 mg/m <sup>3</sup>

#### Biological occupational exposure limits

Chemical name	CAS No	Singapore
Sodium hydroxide <1%	1310-73-2	NDF

### Appropriate engineering controls

#### Engineering Controls

Showers  
Eyewash stations  
Ventilation systems.

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

#### Respiratory protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

#### Hand Protection

Wear suitable gloves. Impervious gloves. Barrier creams may help to protect the exposed areas of skin. Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425 and the standard EN 374 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374-1:2016.

#### Eye/face protection

If splashes are likely to occur, wear safety glasses with side-shields.

#### Skin and body protection

Wear suitable protective clothing. Long sleeved clothing. Avoid contact with eyes, skin and clothing. Wash contaminated clothing before reuse.

#### General Hygiene Considerations

Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes or clothing.

#### Environmental exposure controls

Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water.

#### Thermal hazards

None under normal processing.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical state</b>	Liquid	<b>Color</b>	colorless
<b>Appearance</b>	aqueous solution	<b>Odor threshold</b>	No data available
<b>Odor</b>	None		

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<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Molecular weight</b>	No data available	
<b>pH</b>	11.8	@ 20 °C
<b>Melting point / freezing point</b>	~ 0 °C / 32 °F	
<b>Initial boiling point and boiling range</b>	~ 100 °C / 212 °F	
<b>Evaporation rate</b>	1 (water = 1)	
<b>Vapor pressure</b>	23.702 mm Hg / 3.16 kPa at 25 °C / 77 °F	
<b>Relative vapor density</b>	0.62	
<b>Specific gravity - VALUE 1</b>	0.9970	
<b>Partition coefficient</b>	Not applicable	
<b>Soil Organic Carbon-Water Partition Coefficient</b>	Not applicable	
<b>Autoignition temperature</b>	No data available	
<b>Decomposition temperature</b>	No data available	
<b>Dynamic viscosity</b>	No data available	
<b>Kinematic viscosity</b>	No data available	

#### Solubility(ies)

##### **Water solubility**

<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water Solubility Temperature</u>
Soluble	> 1000 mg/L	25 °C / 77 °F

##### **Solubility in other solvents**

Acid	Soluble	> 1000 mg/L	25 °C / 77 °F
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#### Other information

##### **Metal Corrosivity**

**Steel Corrosion Rate** 0 mm/yr / 0 in/yr  
**Aluminum Corrosion Rate** 0 mm/yr / 0 in/yr

##### **Volatile Organic Compounds (VOC) Content**

<b>Chemical name</b>	<b>CAS No</b>	<b>Volatile organic compounds (VOC) content</b>	<b>CAA (Clean Air Act)</b>
Sodium hydroxide	1310-73-2	No data available	-

##### **Explosive properties**

**Upper explosion limit** No data available  
**Lower explosion limit** No data available

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#### Flammable properties

**Flash point** No data available

#### Flammability Limit in Air

**Upper flammability limit:** No data available

**Lower flammability limit:** No data available

#### Oxidizing properties

No data available.

#### Bulk density

No data available

## Section 10: STABILITY AND REACTIVITY

#### Reactivity

Not applicable.

#### Chemical stability

**Stability** Stable under normal conditions.

#### Explosion data

**Sensitivity to Mechanical Impact** None

**Sensitivity to Static Discharge** None.

#### Possibility of hazardous reactions

**Possibility of Hazardous Reactions** None under normal processing.

#### Hazardous polymerization

None under normal processing.

#### Conditions to avoid

**Conditions to avoid** None known based on information supplied.

#### Incompatible materials

**Incompatible materials** Strong acids. Strong bases. Strong oxidizing agents.

#### Hazardous decomposition products

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

## Section 11: TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

#### Product Information

**Inhalation** May cause irritation of respiratory tract.

**Eye contact** Irritating to eyes. Causes serious eye irritation.

**Skin contact** Causes skin irritation.

**Ingestion** Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Symptoms** Redness. May cause redness and tearing of the eyes.

#### Acute toxicity

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Based on available data, the classification criteria are not met

**Mixture**

No data available.

**Ingredient Acute Toxicity Data**

No data available.

**Unknown Acute Toxicity**

0% of the mixture consists of ingredient(s) of unknown toxicity.

**Acute Toxicity Estimations (ATE)**

<b>ATEmix (oral)</b>	No information available
<b>ATEmix (dermal)</b>	No information available
<b>ATEmix (inhalation-dust/mist)</b>	No information available
<b>ATEmix (inhalation-vapor)</b>	No information available
<b>ATEmix (inhalation-gas)</b>	No information available

**Skin corrosion/irritation**

Classification based on data available for ingredients. Irritating to skin.

**Mixture**

Test data reported below.

<b>Test method</b>	<b>Species</b>	<b>Results</b>	<b>Key literature references and sources for data</b>
None reported	Rabbit	Not corrosive to skin	Outside testing

**Ingredient Skin Corrosion/Irritation Data**

No data available.

<b>Chemical name</b>	<b>Test method</b>	<b>Species</b>	<b>Reported dose</b>	<b>Exposure time</b>	<b>Results</b>	<b>Key literature references and sources for data</b>
Sodium hydroxide (<1%) CAS#: 1310-73-2	Patch test	Human	20 mg	24 hours	Corrosive to skin	RTECS

**Serious eye damage/irritation**

Classification based on data available for ingredients. Irritating to eyes.

**Mixture**

No data available.

**Ingredient Eye Damage/Eye Irritation Data**

No data available.

<b>Chemical name</b>	<b>Test method</b>	<b>Species</b>	<b>Reported dose</b>	<b>Exposure time</b>	<b>Results</b>	<b>Key literature references and sources for data</b>
Sodium hydroxide (<1%) CAS#: 1310-73-2	Standard Draize Test	Rabbit	0.05 mg	24 hours	Corrosive to eyes	RTECS

**Respiratory or skin sensitization**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Sensitization Data**

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No data available.

**STOT - single exposure**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Specific Target Organ Toxicity Single Exposure Data**

No data available.

**STOT - repeated exposure**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Specific Target Organ Toxicity Repeat Exposure Data**

No data available.

**Carcinogenicity**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Carcinogenicity Data**

No data available.

Chemical name	CAS No	ACGIH	IARC	NTP	OSHA
Sodium hydroxide	1310-73-2	-	-	-	-

**Legend**

ACGIH (American Conference of Governmental Industrial Hygienists)	Does not apply
IARC (International Agency for Research on Cancer)	Does not apply
NTP (National Toxicology Program)	Does not apply
OSHA	Does not apply

**Germ cell mutagenicity**

Based on available data, the classification criteria are not met.

**Mixture invitro Data**

No data available.

**Substance invitro Data**

No data available.

**Mixture invivo Data**

No data available.

**Substance invivo Data**

No data available.

**Reproductive toxicity**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.



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**Ingredient Reproductive Toxicity Data**

No data available.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

## Section 12: ECOLOGICAL INFORMATION

**Ecotoxicity**

**Unknown aquatic toxicity**

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

**Mixture**

**Aquatic Acute Toxicity**

No data available.

**Aquatic Chronic Toxicity**

No data available.

**Substance**

**Aquatic Acute Toxicity**

No data available.

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hydroxide (<1%) CAS#: 1310-73-2	96 hours	<i>Oncorhynchus mykiss</i>	LC <sub>50</sub>	45.4 mg/L	IUCLID
Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium hydroxide (<1%) CAS#: 1310-73-2	48 Hours	<i>Daphnia sp.</i>	EC <sub>50</sub>	40.4 mg/L	IUCLID

**Aquatic Chronic Toxicity**

No data available.

**Persistence and degradability**

**Mixture**

No data available.

**Bioaccumulation**

**Mixture**

No data available.

**Partition coefficient**

Not applicable

**Mobility**

**Soil Organic Carbon-Water Partition Coefficient**

Not applicable

**Other adverse effects**

No information available.

## Section 13: DISPOSAL CONSIDERATIONS

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#### Waste treatment methods

**Waste from residues/unused products**

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging**

Do not reuse empty containers.

### Section 14: TRANSPORT INFORMATION

#### IMDG

UN number or ID number	Not regulated
Transport hazard class(es)	Not regulated
Packing Group	Not regulated
Marine pollutant	Not applicable
Special precautions for user	Not applicable

#### ADR

UN number or ID number	Not regulated
Proper shipping name	Not regulated
Transport hazard class(es)	Not regulated
Packing Group	Not regulated
Environmental hazards	Not applicable
Special precautions for user	None

#### IATA

UN number or ID number	Not regulated
Transport hazard class(es)	Not regulated
Packing group	Not regulated
Environmental hazards	Not applicable
Special precautions for user	None

#### **Additional information**

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is not in a reagent set or kit, the classification given above applies.

If the item is part of a reagent set or kit the classification would change to the following:

UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.

If the item is not regulated, the Chemical Kit classification does not apply.

### Section 15: REGULATORY INFORMATION

#### Regulatory information

##### Singapore

#### **Arms and Explosives Act**

Not applicable.

#### **Chemical Weapons Prohibition Act**

Not applicable.

#### **Environmental Protection and Management (Hazardous Substances) Regulations**

Verify that license requirements are met.

Chemical name	Hazardous Substances	transport
Sodium hydroxide 'CAS #:' 1310-73-2	X	-

**Environmental Public Health Act**

Dispose of waste product or used containers according to local regulations.

**Fire Safety (Petroleum and Flammable Materials) Regulations**

Not applicable.

**Hazardous Waste (Control of Export, Import and Transit) Act**

It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Take note that wastes may be subject to export, import, or transit controls pursuant to the Basel convention and/or local regulations implementing the Basel convention.

**Misuse of Drugs Act**

Not applicable.

**POISON**

Not applicable.

**Strategic Goods (Control) Act**

Not applicable.

**Workplace Safety and Health Act**

See section 8 for national exposure control parameters. Comply with the health and safety at work laws.

**Pre-employment screening and appropriate health surveillance**

Not applicable

**International Regulations**

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

**International Inventories**

<b>TSCA</b>	Complies
<b>DSL/NDSL</b>	Complies
<b>EINECS/ELINCS</b>	Complies
<b>ENCS</b>	Complies
<b>IECSC</b>	Complies
<b>KECL - Existing substances</b>	Complies
<b>PICCS</b>	Complies
<b>TCSI</b>	Complies
<b>AICS</b>	Complies
<b>NZIoC</b>	Complies

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**TCSI** - Taiwan Chemical Substances Inventory

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

## Section 16: OTHER INFORMATION

### Classification Guidance Used

Product is a mixture classified and labelled according to EC1272/2008.

### Key or legend to abbreviations and acronyms used in the safety data sheet

SVHC: Substances of Very High Concern for Authorization:

### Key literature references and sources for data

ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
ATSDR	ATSDR (Agency for Toxic Substances and Disease Registry)
CCRIS	CCRIS (Chemical Carcinogenesis Research Information System)
CDC	CDC (Center for Disease Control)
CEPA	CEPA (Canadian Environmental Protection Agency)
CICAD	CICAD (Concise International Chemical Assessment Documents)
ECHA	ECHA (The European Chemicals Agency)
EEA	EEA (European Environment Agency)
EPA	EPA (Environmental Protection Agency)
ERMA	ERMA (New Zealand's Environmental Risk Management Authority)
ECOSARS	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
FDA	FDA (Food & Drug Administration)
GESTIS	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
HSDB	HSDB (Hazardous Substances Data Bank)
INERIS	INERIS (The National Industrial Environment and Risks Institute)
IPCS INCHEM	IPCS INCHEM (International Programme on Chemical Safety)
IUCLID	IUCLID (The International Uniform Chemical Information Database)
NITE	Japan National Institute of Technology and Evaluation (NITE)
NIH	NIH (National Institutes of Health)
NIOSH	NIOSH (National Institute for Occupational Safety and Health)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
NDF	no data
NICNAS	Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH IDLH	Immediately Dangerous to Life or Health
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labor)
PEEN	PEEN (Pan European Ecological Network)
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
SIDS	SIDS (Screening Information Dataset) for High Volume Chemicals
SYKE	The Finnish Environment Institute (SYKE)
USDA	USDA (United States Department of Agriculture)
USDC	USDC (United States Department of Commerce)
WHO	WHO (World Health Organization)

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Ceiling Limit Value	MAC	Maximum Allowable Concentration
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.

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SKN\* Skin designation  
RSP+ Respiratory sensitization  
C Carcinogen  
M mutagen

SKN+ Skin sensitization  
\*\* Hazard Designation  
R Reproductive toxicant

**Prepared By** Hach Product Compliance Department

**Issue Date** 18-10-2016

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**Restrictions on use** None

**Training Advice** Specific treatment (see .? on this label)

**This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

**Disclaimer**

**USER RESPONSIBILITY:** Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

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**End of Safety Data Sheet**