

SAFETY DATA SHEET

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

Issue Date 09-Jul-2019 Revision Date 28-Mar-2023 Version 2.5

Section 1: IDENTIFICATION

Product identifier

Product Name Potassium Iodate-Iodide Standard Solution 0.0125 N

Other means of identification

Product Code(s) 1400153

Proper shipping name Not regulated

Safety data sheet number M00361

Pure substance/mixture Mixture

Recommended use of the chemical and restrictions on use

Recommended Use Standard solution. Water Analysis.

Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address Supplier

Hach Company, P.O.Box 389, Loveland, HACH SEA Headquarters,

CO 80539, USA, +1(970) 669-3050 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

Serious eye damage/eye irritation Category 1

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Signal word - Danger

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Hazard statements

H318 - Causes serious eye damage

Precautionary statements

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

P310 - Immediately call a POISON CENTER or doctor/physician

Other Hazards Known

None

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Family Mixture

Substance

Not applicable

Mixture

Chemical name	Formula	EC No (EU Index No)	CAS No	Percent Range
Sodium hydroxide	NaOH	(011-002-00-6)	1310-73-2	<1%
		215-185-5		
Potassium iodide (KI)	KI	231-659-4	7681-11-0	<1%

Section 4: FIRST AID MEASURES

Description of first aid measures

General advice Immediate medical attention is required. Show this safety data sheet to the doctor in

attendance.

Inhalation Remove to fresh air. Get medical attention immediately if symptoms occur.

Eye contact Get immediate medical advice/attention. Rinse immediately with plenty of water, also under

the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do.

Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area.

Skin contact Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical

attention if irritation develops and persists.

Ingestion 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.

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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 physiciansTreat symptomatically.

Section 5: FIRE-FIGHTING MEASURES

surrounding environment.

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

Specific hazards arising from the

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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. 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 Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder,

sawdust). Take up mechanically, placing in appropriate containers for disposal.

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.

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. Store locked up.

Keep out of the reach of children.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

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Occupational exposure limits

Chemical name	Singapore	OSHA PEL	ACGIH TLV	NIOSH
Sodium hydroxide	STEL: 2 mg/m ³	TWA: 2 mg/m ³	Ceiling: 2 mg/m ³	IDLH: 10 mg/m ³
(<1%)		(vacated) Ceiling: 2		Ceiling: 2 mg/m ³
CAS#: 1310-73-2		mg/m³		
Potassium iodide (KI)	NDF	NDF	TWA: 0.01 ppm	NDF
(<1%)			inhalable fraction and	
CAS#: 7681-11-0			vapor	

Biological occupational exposure limits

Chemical name	CAS No	Singapore
Sodium hydroxide	1310-73-2	NDF
<1%		
Potassium iodide (KI)	7681-11-0	NDF
<1%		

Appropriate engineering controls

Engineering Controls S

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.

Eye/face protection Tight sealing safety goggles.

Skin and body protection Wear suitable protective clothing.

General Hygiene Considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do

not eat, drink or smoke when using this product.

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

Physical state Liquid

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Appearanceaqueous solutionColorcolorlessOdorOdorlessOdor thresholdNo data available

Property Values Remarks • Method

Molecular weight No data available

pH 12.7 @ 20 °C

Melting point / freezing point \sim 0 °C / 32 °F

Initial boiling point and boiling range ~ 100 °C / 212 °F

Evaporation rate 1 (water = 1)

Vapor pressure 17.477 mm Hg / 2.33 kPa at 20 °C / 68 °F

Relative vapor density 0.62

Specific gravity - VALUE 1 1

Partition coefficient Not applicable

Soil Organic Carbon-Water Partition

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Coefficient

Not applicable

Autoignition temperature No data available

Decomposition temperature No data available

Dynamic viscosity $\sim 1 \text{ cP (mPa s)}$ at 20 °C / 68 °F

Kinematic viscosity ~ 1 cSt (mm²/s) at 20 °C / 68 °F

Solubility(ies)

Water solubility

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/l	25 °C / 77 °F

Solubility in other solvents

Acid	Soluble	> 1000 mg/L	25 °C / 77 °F
Most Polar Organic Solvents	Soluble	> 1000 mg/L	25 °C / 77 °F

Other information

Metal Corrosivity

Steel Corrosion RateNo data availableAluminum Corrosion Rate4.14 mm/yr / 0.16 in/yr

Volatile Organic Compounds (VOC) Content

Chemical name	CAS No	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Sodium hydroxide	1310-73-2	No data available	-
Potassium iodide (KI)	7681-11-0	Not applicable	-

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Explosive properties

Upper explosion limitNo data availableLower explosion limitNo data available

Flammable properties

Flash point No data available

Flammability Limit in Air

Upper flammability limit:No data availableLower 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 No known effect based on information supplied.

Eye contact Severely irritating to eyes. Causes serious eye damage. May cause burns. May cause

irreversible damage to eyes.

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Skin contact May cause irritation.

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

Symptoms Redness. Burning. May cause blindness.

Acute toxicity

Based on available data, the classification criteria are not met

Mixture

No data available.

Ingredient Acute Toxicity Data

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium iodide (KI) (<1%) CAS#: 7681-11-0	Rat LD ₅₀	2779 mg/kg	None reported	None reported	RTECS

Unknown Acute Toxicity

0.0004% of the mixture consists of ingredient(s) of unknown toxicity.

Acute Toxicity Estimations (ATE)

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

Skin corrosion/irritation

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

Mixture

No data available.

Ingredient Skin Corrosion/Irritation Data

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
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. Causes burns. Risk of serious damage to eyes.

Mixture

No data available.

Ingredient Eye Damage/Eye Irritation Data

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Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
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.

No data available.

Ingredient Sensitization Data

Test data reported below.

Skin Sensitization Exposure Route

Chemical name	Test method	Species	Results	Key literature references and sources for data
Potassium iodide (KI) (<1%) CAS#: 7681-11-0	Patch test	Human	Not confirmed to be a skin sensitizer	ERMA

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

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium iodide (KI)	Mouse	1862 mg/kg	None reported	Lungs, Thorax, or	RTECS
(<1%)	LDLo			Respiration	
CAS#: 7681-11-0				Dyspnea	

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

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium iodide (KI) (<1%) CAS#: 7681-11-0	Rat NOAEL	0.5 mg/kg	90 days	None reported	ECHA

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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	-	-	-	-
Potassium iodide (KI)	7681-11-0	-	-	-	-

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

Test data reported below.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Potassium iodide (KI) (<1%) CAS#: 7681-11-0	Cytogenetic analysis	Rat ascites tumor	500 mg/kg	None reported	Positive test result for mutagenicity	RTECS

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.

Ingredient Reproductive Toxicity Data

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium iodide (KI)	Human	2700 mg/kg	39 weeks	Specific Developmental	RTECS
(<1%)	TD_Lo			Abnormalities	
CAS#: 7681-11-0				Endocrine System	

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Aspiration hazard

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

Section 12: ECOLOGICAL INFORMATION

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

0.0004% of the mixture consists of components(s) of unknown hazards to the aquatic Unknown aquatic toxicity

environment.

Mixture

Aquatic Acute Toxicity

No data available.

Aquatic Chronic Toxicity

No data available.

Substance

Aquatic Acute Toxicity

Test data reported below.

Fish

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	Oncorhynchus mykiss	LC50	45.4 mg/L	IUCLID

Crustacea

	time	- 1	type	Reported dose	Key literature references and sources for data
Sodium hydroxide (<1%) 48	Hours	Daphnia sp.	EC50	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

Not applicable **Soil Organic Carbon-Water Partition Coefficient**

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Other adverse effects

No information available.

Section 13: DISPOSAL CONSIDERATIONS

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

Note: No special precautions necessary.

IMDG

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

ADR

UN number or ID number Not regulated Not regulated Proper shipping name Transport hazard class(es) Not regulated **Packing Group** Not regulated **Environmental hazards** Not applicable

Special precautions for user None

IATA

Not regulated **UN** number or ID number Transport hazard class(es) Not regulated Not regulated Packing group **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.

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Environmental Protection and Management (Hazardous Substances) Regulations

Verify that license requirements are met.

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

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

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

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

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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

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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 (Agency for Toxic Substances and Disease Registry) **ATSDR** CCRIS (Chemical Carcinogenesis Research Information System) **CCRIS**

CDC (Center for Disease Control) CDC

CEPA CEPA (Canadian Environmental Protection Agency)

CICAD CICAD (Concise International Chemical Assessment Documents)

ECHA ECHA (The European Chemicals Agency) EEA (European Environment Agency) FFA EPA (Environmental Protection Agency) FPA

ERMA ERMA (New Zealands Environmental Risk Management Authority)

ECOSARS Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) SuiteTM

FDA FDA (Food & Drug Administration)

GESTIS (Information System on Hazardous Substances of the German Social Accident **GESTIS**

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 (The International Uniform Chemical Information Database) **IUCLID** Japan National Institute of Technology and Evaluation (NITE) NITE

NIH NIH (National Institutes of Health)

NIOSH NIOSH (National Institute for Occupational Safety and Health) LOLI (List of Lists - An International Chemical Regulatory Database) LOLI

NDF

NICNAS Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH IDLH Immediately Dangerous to Life or Health

OSHA (Occupational Safety and Health Administration of the US Department of Labor) **OSHA**

PEEN (Pan European Ecological Network) **PEEN**

RTECS RTECS (Registry of Toxic Effects of Chemical Substances) SIDS (Screening Information Dataset) for High Volume Chemicals SIDS

The Finnish Environment Institute (SYKE) **SYKE** USDA (United States Department of Agriculture) **USDA** USDC (United States Department of Commerce) **USDC**

WHO (World Health Organization) WHO

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)

Ceiling Limit Value MAC Maximum Allowable Concentration Ceiling

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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.

SKN* Skin designation Respiratory sensitization RSP+

Carcinogen С Μ mutagen

SKN+

R

Skin sensitization Hazard Designation Reproductive toxicant

Hach Product Compliance Department

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Prepared By

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Restrictions on use

None

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.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE **OBTAINED FROM THE USE THEREOF.**

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End of Safety Data Sheet

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