

1. Identification

Product identifier	Sodium hydroxide solution
Other means of identification	
Product number	GENLP-TDC-002-CAN
Recommended use	Product is a unique alkaline material, playing a vital role in many industrial processes.
Recommended restrictions	Use in accordance with supplier's recommendations.
Manufacturer/Importer/Supplier/Distributor information	
Importer	TDC Energy Canada, LTD.
Address	1916 Farmerville Hwy Ruston, LA 71270
Telephone	Customer Service (800) 422-6274
Email	TDCcustomerservice@genlp.com
CHEMTREC:	800-424-9300 (Domestic – North America)
CHEMTREC:	+1-703-527-3887 (International)

2. Hazard identification

Physical hazards	Corrosive to metals	Category 1
Health hazards	Skin corrosion/irritation	Category 1A
	Serious eye damage/eye irritation	Category 1
	Specific target organ toxicity following single exposure	Category 3 respiratory tract irritation
	Environmental hazards	Hazardous to the aquatic environment, acute hazard

Label elements



Signal word	Danger
Hazard statement	May be corrosive to metals. Causes severe skin burns and eye damage. May cause respiratory irritation. Harmful to aquatic life.
Precautionary statement	
Prevention	Keep only in original packaging. Do not breathe mist/vapours. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
Response	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE/doctor. Wash contaminated clothing before reuse. Absorb spillage to prevent material-damage.
Storage	Store locked up. Store in a corrosion resistant container with a resistant inner liner.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Other hazards	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Sodium hydroxide		1310-73-2	49 - 51
Composition comments	Components not listed are either non-hazardous or are below reportable limits. All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.		
4. First-aid measures			
Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.		
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control centre immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.		
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Provide eyewash station. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control centre immediately.		
Ingestion	Call a physician or poison control centre immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.		
Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Causes digestive tract burns. May cause respiratory irritation.		
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.		
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.		
5. Fire-fighting measures			
Suitable extinguishing media	Use fire-extinguishing media appropriate for surrounding materials.		
Unsuitable extinguishing media	No restrictions known.		
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.		
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.		
Fire fighting equipment/instructions	Cool containers exposed to heat with water spray and remove container, if no risk is involved.		
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.		
6. Accidental release measures			
Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapour. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.		
Methods and materials for containment and cleaning up	Prevent entry into waterways, sewer, basements or confined areas. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb spillage to prevent material damage. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Neutralize with dilute acids. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.		
Environmental precautions	Recover as much product as possible. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.		
7. Handling and storage			
Precautions for safe handling	Do not breathe mist or vapour. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.		

Conditions for safe storage, including any incompatibilities

Store locked up. Store in a cool, dry place out of direct sunlight. Store in corrosive resistant container with a resistant inner liner. Keep only in the original container. Unsuitable containers: copper, zinc, aluminium, copper alloy, zinc alloy, aluminium alloy. Store away from incompatible materials (see Section 10 of the SDS). Store at temperature below 150°F. Provide appropriate secondary containment.

8. Exposure controls/personal protection**Occupational exposure limits****US. ACGIH Threshold Limit Values**

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m ³

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m ³

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m ³

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m ³

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m ³

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m ³

Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m ³

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Wear chemical splash goggles and face shield.

Skin protection**Hand protection**

Wear appropriate chemical resistant gloves. Neoprene, PVC, nitrile, or natural rubber gloves are recommended.

Other

Wear appropriate chemical resistant clothing.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards

Wear appropriate thermal protective equipment.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties**Appearance**

Physical state	Liquid.
Form	Liquid.
Colour	Colorless, clear to slightly hazy.

Odour No distinct odor.

Odour threshold Not available.

pH 14

Melting point/freezing point Not available.

Initial boiling point and boiling range 145 °C (293 °F)

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit – upper (%) Not available.

Vapour pressure 17 - 18 mmHg (20 °C)

Vapour density Not available.

Relative density 1.52 (20 °C) (Water = 1)

Solubility(ies)

Solubility (water) Completely soluble in water.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Other information

Explosive properties Not explosive.

Oxidising properties Not oxidising.

Pounds per gallon 12.7 lbs/gal

10. Stability and reactivity

Reactivity Reacts violently with strong acids. This product may react with oxidizing agents. May be corrosive to metals.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.

Conditions to avoid Contact with incompatible materials. Do not mix with other chemicals.

Incompatible materials Acids. Oxidizing agents. Trichloroethylene. Nitromethane. Organic peroxides. Organic halogens.

Hazardous decomposition products Contact with water produces heat, as well as toxic and corrosive fumes. Contact with metals may evolve flammable hydrogen gas. Thermal decomposition or combustion may produce: Sodium oxides. Carbonates. Peroxides.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns.

Symptoms related to the physical, chemical and toxicological characteristics Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Causes digestive tract burns. May cause respiratory irritation.

Information on toxicological effects

Acute toxicity Not expected to be acutely toxic.

Skin corrosion/irritation Causes severe skin burns.

Serious eye damage/eye irritation Causes serious eye damage.

Respiratory or skin sensitisation

Canada - Alberta OELs: Irritant

Sodium hydroxide (CAS 1310-73-2) Irritant

Respiratory sensitisation Not a respiratory sensitiser.

Skin sensitisation This product is not expected to cause skin sensitisation.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure May cause respiratory irritation.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful.

Further information No other specific acute or chronic health impact noted.

12. Ecological information

Ecotoxicity Harmful to aquatic life.

Components	Species	Test Results
Sodium hydroxide (CAS 1310-73-2)		
Aquatic		
<i>Acute</i>		
Crustacea	EC50 Ceriodaphnia dubia	40.4 mg/l, 48 Hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil This product is water soluble and may disperse in soil.

Other adverse effects The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code D002: Waste Corrosive material [pH <=2 or >=12.5, or corrosive to steel]
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

Contaminated packaging

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information**TDG**

UN number UN1824
UN proper shipping name SODIUM HYDROXIDE SOLUTION
Transport hazard class(es)
Class 8
Subsidiary risk -
Packing group II
Environmental hazards No.
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number UN1824
UN proper shipping name Sodium hydroxide solution
Transport hazard class(es)
Class 8
Subsidiary risk -
Label(s) 8
Packing group II
Environmental hazards No.
ERG Code 8L
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number UN1824
UN proper shipping name SODIUM HYDROXIDE SOLUTION
Transport hazard class(es)
Class 8
Subsidiary risk -
Packing group II
Environmental hazards
Marine pollutant No.
EmS F-A, S-B
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information**Canadian regulations****Controlled Drugs and Substances Act**

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

International regulations**Stockholm Convention**

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto Protocol

Not applicable.

Montreal Protocol

Not applicable.



Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date	16-Aug-2016
Revision date	12-May-2020
Version No.	01
List of abbreviations	EC50: Effective Concentration, 50%.
Disclaimer	TDC, L.L.C. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.