HAVILAND PRODUCTS COMPANY
SAFETY DATA SHEET

Section 1: Identification

Product Name: Caustic Soda 50% Liq - NSF Product Code: H000373

Haviland Products Company
421 Ann Street NW
Grand Rapids, MI 49504
(616) 361-6691

Emergency Phone:
CHEMTREC: Canada and USA - (800) 424-9300
CHEMTREC: In Mexico - 01-800-681-9531

Product Use: Industrial
Not recommended for: NA

Certified to NSF/ANSI 60

Section 2: Hazard(s) Identification

GHS Ratings:

Corrosive to metals	1	Corrosive to metals
Acute Toxicity - Oral	4	Oral>300+<=2000mg/kg
Skin corrosion/irritation	1A	Destruction of dermal tissue: Exposure < 3 min. Observation < 1 hour, visible necrosis in at least one animal
Serious eye damage/eye irritation	1	Serious eye damage: Irreversible damage 21 days after exposure, Draize score: Corneal opacity >= 3, Iritis > 1.5
Specific target organ toxicity single exposure	1	Significant toxicity in humans- Reliable, good quality human case studies or epidemiological studies, Presumed significant toxicity in humans- Animal studies with significant and/or severe toxic effects relevant to humans at generally low exposure (guidan
Acute aquatic toxicity	A3	Acute toxicity <= 10.0 but < 100 mg/l

GHS Hazards

H290	May be corrosive to metals
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H370	Causes damage to organs
H402	Harmful to aquatic life

GHS Precautions

P234	Keep only in original container
P260	Do not breathe dust/fume/gas/mist/vapors/spray
P264	Wash face, hands, and any exposed skin thoroughly after handling
P270	Do not eat, drink or smoke when using this product
P273	Avoid release to the environment
P280	Wear protective gloves/protective clothing/eye protection/face protection
P310	Immediately call a POISON CENTER or doctor/physician
P321	Specific treatment (see first aid treatment on SDS)
P330	Rinse mouth
P363	Wash contaminated clothing before reuse
P390	Absorb spillage to prevent material damage

P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P301+P330+P331	If swallowed: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	If on skin (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.
P304+P340	If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P307+P311	IF exposed: Call a POISON CENTER or doctor/physician
P405	Store locked up
P406	Store in a corrosive resistant container with a resistant inner liner
P501	Dispose of contents/container in accordance with local/regional/national/international regulations

Danger

Section 3: Composition/Information on Ingredients

Chemical Name / CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits
Water 7732-18-5 40% - 50%			
Sodium hydroxide 1310-73-2 40% - 50% Vapor Pressure: 0 mmHg	2 mg/m3 TWA	2 mg/m3 Ceiling	NIOSH: 2 mg/m3 Ceiling

Section 4: First-aid Measures

Inhalation

Rescuers should put on appropriate protective gear. Remove from area of exposure. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Keep victim warm. Get immediate medical attention. To prevent aspiration, keep head below knees.

Eye Contact

Immediately flush eyes with water. Flush eyes with water for a minimum of 15 minutes, occasionally lifting and lowering upper lids. Get medical attention promptly.

Skin Contact

Remove contaminated clothing. Wash skin with soap and water. Get medical attention. Wash clothing separately and clean shoes before reuse.

Ingestion

If swallowed, do NOT induce vomiting. Give victim a glass of water. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Section 5: Fire-fighting Measures

Extinguishing Media
Use media suitable for the surrounding fire.

Specific Hazards Arising from the Chemical
In water solution, sodium hydroxide can react with amphoteric metals, generating hydrogen, which is a flammable and/or explosive gas when ignited. Contact with acids or strong oxidizers will cause vigorous reactions, with generation of heat and can cause splattering of corrosive mist. Contact with acids will also release large amounts of CO2 gas.

Special Protective Equipment and Precautions for Firefighters
Special Information: As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA / NIOSH approved or equivalent) and full protective gear.

Section 6: Accidental Release Measures

Spill and Leak Procedures
Use appropriate safety equipment. contain spilled material if possible. Neutralize and collect in suitable and properly labeled containers. Prevent from entering into soil, ditches, sewers, waterways and or groundwater

Section 7: Handling and Storage

Handling Procedures
Use with adequate ventilation. Avoid breathing dusts, mists, and vapors. Do not get in eyes, on skin, or on clothing. Wear eye protection and protective clothing. Wash thoroughly after handling.
Storage Requirements
Store containers in a cool, dry, well ventilated place. Keep container closed when not in use.

Section 8: Exposure Control/Personal Protection

Chemical Name / CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits
Water 7732-18-5			
Sodium hydroxide 1310-73-2	2 mg/m3 TWA	2 mg/m3 Ceiling	NIOSH: 2 mg/m3 Ceiling

ENGINEERING CONTROLS: Provide ventilation sufficient to maintain exposure below the recommended limits.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant the use of a respirator.

SKIN PROTECTION: Wear impervious protective gloves. Wear protective gear as needed - apron, suit, boots.

EYE PROTECTION: Wear safety glasses with side shields (or goggles) and a face shield.

OTHER PROTECTIVE EQUIPMENT: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

HYGENIC PRACTICES: Do not eat, drink, or smoke in areas where this material is used. Avoid breathing vapors. Remove contaminated clothing and wash before reuse. Wash thoroughly after handling. Wash hands before eating.

Section 9: Physical and Chemical Properties

Appearance: Colorless Liqid	**Odor:** Odorless
Vapor Pressure: 23.76 mm HG @ 25 °C	**Odor threshold:** Not Available
Vapor Density: Not Available	**pH:** 14
Density: 12.77 lbs/gal	**Melting point:** Not Available
Freezing point: 10 - 12.8 °C	**Solubility:** Not Available
Boiling range: Not Available	**Flash point:** Not Available
Evaporation rate: Not Available	**Flammability:** Not Available
Explosive Limits: Not Available	**Specific Gravity:** Not Available
Autoignition temperature: Not Available	**Decomposition temperature:** Not Available
Viscosity: Not Available	**Grams VOC less water:** Not Available

Section 10: Stability and Reactivity

Chemical Stability:

STABLE

Incompatible Materials

Contact with organic materials and concentrated acids may cause violent reactions. Contact with magnesium, aluminum, galvanized zinc, tin, chromium, brass, and bronze generates explosive hydrogen. Reactions with various food sugars may form monoxide.

Conditions to Avoid

None Known

Hazardous Decomposition Products

Carbon monoxide. Heated to decompostion, it emits fumes of sodium oxide. Decomposition by reaction with certain metals releases flammable and explosive gas.

Hazardous Polymerization

Hazardous polymerization will not occur.

Section 11: Toxicology Information

Mixture Toxicity

Dermal Toxicity LD50: 2,700mg/kg

Component Toxicity

1310-73-2 Sodium hydroxide
Dermal LD50: 1,350 mg/kg (Rabbit)

Routes of Entry:

Inhalation
Ingestion
Skin contact
Eye contact

Target Organs

Eyes Skin Respiratory System

Effects of Overexposure

CAS Number	Description	% Weight	Carcinogen Rating
None			N/A

Section 12: Ecological Information

ECOTOXICITY (EC, IC, and LC):

Component:	*Freshwater Fish:*	*Invertebrate Toxicity:*	*Algae Toxicity:*	*Other Toxicity:*
Sodium Hydroxide 1310-73-2 (5.5 - 51.5 %)	*LC50 Oncorhynchus mykiss: 45.4 mg/L 96h static	-----	No data available	No data available
Sodium Chloride 7647-14-5 (0 - 15 %)	*LC50 Lepomis macrochirus: 5560 - 6080 mg/L 96h flow-through *LC50 Lepomis macrochirus: 12946 mg/L 96h static *LC50 Pimephales promelas: 6020 - 7070 mg/L 96h static *LC50 Pimephales promelas: 7050 mg/L 96h semi-static *LC50 Pimephales promelas: 6420 - 6700 mg/L 96h static *LC50 Oncorhynchus mykiss: 4747 - 7824 mg/L 96h flow-through	*EC50 Daphnia magna: 340.7 - 469.2 mg/L 48h *EC50 Daphnia magna: 1000 mg/L 48h	No data available	*LC50 Eisenia foetida (48 h filter paper) 0.1 - 1 mg/cm2

Aquatic Toxicity:

In water, Sodium Hydroxide (NaOH) will hydrolyze to the sodium and hydrogen ions and do not represent a specific hazard. The buffering capability of the environmental compartment will determine the extent of the toxicological response. This material has exhibited moderate toxicity to aquatic organisms. Data provided are for sodium hydroxide.

Fish Toxicity:

LC50 Brook trout: 25 ppm/24 hr
LC50 King salmon: 48 ppm

Invertebrate Toxicity:

EC50 Daphnia magna: 100 ppm
EC50 Shrimp: 33 - 100 ppm/48 hr.
EC50 Cockle: 330 - 1000 ppm/48 hr.

Section 13: Disposal Considerations

Dispose of in accordance with local, state and federal regulations.

Section 14: Transportation Information

The following is for US DOT Highway Transportation. Other modes/jurisdictions may have different classifications.

UN Code: 1824 **DOT Name:** Sodium Hydroxide, Solution
Hazard Class: 8 **Packager Group:** II

Section 15: Regulatory Information

CERCLA/SARA Hazardous Substances

1310-73-2 Sodium hydroxide

OSHA Process Safety Management Highly Hazardous Chemicals

U.S. Clean Air Act Toxic and Flammable Substances

SARA 313

This product contains the following EPCRA section 313 chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know-Act of 1986 (40 CFR 372):

This information must be included in all SDSs that are copied and distributed for this material.

TSCA 8(b) Inventory

1310-73-2 Sodium hydroxide
7732-18-5 Water

Country	Regulation	All Components Listed

Section 16: Other Information

Date Prepared: 9/23/2022

Disclaimer

The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its affiliates or subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our SDS are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated SDS for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, face mask, fume hood). For proper handling and disposal, always comply with federal, state and local regulations.