HAVILAND PRODUCTS COMPANY
SAFETY DATA SHEET

Section 1: Identification

Product Name: Caustic Soda 50% Liquid - 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
Skin corrosive	1A	Destruction of dermal tissue: Exposure < 3 min. Observation < 1 hour, visible necrosis in at least one animal
Eye corrosive	1	Serious eye damage: Irreversible damage 21 days after exposure, Draize score: Corneal opacity >= 3, Iritis > 1.5
Organ toxin 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 (guidance)
Aquatic toxicity	A3	Acute toxicity <= 10.0 but < 100 mg/l

GHS Hazards

H290	May be corrosive to metals
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)
P363	Wash contaminated clothing before reuse
P390	Absorb spillage to prevent material damage
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
Sodium hydroxide 1310-73-2 50 percent	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 fires.

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 reaction, with generation of heat and can cause splattering of corrosive mist. Contact with acids will also release large amounts of CO_2 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

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASE OR SPILLED:
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
Do not get this material in your eyes, on your skin, or on your clothing. Wash thoroughly after handling. Do not inhale vapors or mists of this product. Never add water to product. For dilutions, add product slowly to water while stirring. Use caution; heat may be generated.

Storage Requirements
Keep containers tightly closed when not in use and protect from damage. Store in a cool, well-ventilated area.

Section 8: Exposure Control/Personal Protection

Chemical Name / CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits
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 liquid	**Odor:** Odorless
Vapor Pressure: 23.76 mm HG @ 25 °C	**Odor threshold:** Unknown
Vapor Density: Unknown	**pH:** Strongly Basic
Density: 12.77 lbs/gal	**Melting point:** 10-12.8°C
Freezing point: Unknown	**Solubility:** Unknown
Boiling range: Unknown	**Flash point:** Unknown
Evaporation rate: Unknown	**Flammability:** Unknown
Explosive Limits: Unknown	**Partition coefficient (n-octanol/water):** Unknown

Autoignition temperature: Unknown	**Decomposition temperature:** Unknown
Viscosity: Unknown	**Grams VOC less water:** Unknown

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 carbon monoxide.

Conditions to Avoid

None known

Hazardous Decomposition Products

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

Hazardous Polymerization

Hazardous polymerization will not occur.

Section 11: Toxicology Information

Mixture Toxicity

Dermal Toxicity LD50: 2,700mg/kg

Routes of Entry:

Inhalation
Ingestion
Skin contact
Eye contact

Target Organs

Eyes **Skin** **Respiratory System**

Effects of Overexposure

Emergency Overview

Contact with this material will cause burns to the skin, eyes and mucous membranes. May be harmful if swallowed.

Health Effects

This product is severely irritating to the eyes and may cause irreversible damage including burns and blindness. Corrosive to the skin. This product may produce corrosive damage to the gastrointestinal tract if it is swallowed. Inhalation of mists of this product may cause severe irritation and burns to the respiratory tract.

CAS Number	Description	% Weight	Carcinogen Rating

Section 12: Ecological Information

Component Ecotoxicity

Sodium hydroxide	96 Hr LC50 Oncorhynchus mykiss: 45.4 mg/L [static]

Section 13: Disposal Considerations

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

Section 14: Transportation Information

UN Code: 1824 **DOT Name:** Sodium Hydroxide, Solution

Hazard Class: 8 **Package Group:** II

Section 15: Regulatory Information

Country	Regulation	All Components Listed

Section 16: Other Information

Date Prepared: 8/24/2018

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.