HAVILAND PRODUCTS COMPANY
SAFETY DATA SHEET

Haviland
PRODUCTS COMPANY

Section 1: Identification

Product Name: Bleach - Sod Hypochlorite-NSF Product Code:H000196

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

Emergency Phone
CHEMTREC (800) 424-9300
CHEMTREC International (703) 527-3887

Product Use: Industrial
Not recommended for: No data available

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	3	Transient target organ effects- Narcotic effects- Respiratory tract irritation
Organ toxin repeated exposure	2	Presumed to be harmful to human health- Animal studies with significant toxic effects relevant to humans at generally moderate exposure (guidance)- Human evidence in exceptional cases
Aquatic toxicity	A1	Acute toxicity <= 1.00 mg/l

GHS Hazards

H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H336	May cause drowsiness or dizziness
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life

GHS Precautions

P234	Keep only in original container
P260	Do not breathe dust/fume/gas/mist/vapors/spray
P261	Avoid breathing dust/fume/gas/mist/vapors/spray
P264	Wash face, hands, and any exposed skin thoroughly after handling
P271	Use only outdoors or in a well-ventilated area
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
P312	Call a POISON CENTER or doctor/physician if you feel unwell
P314	Get Medical advice/attention if you feel unwell
P321	Specific treatment (see first aid treatment on SDS)

center immediately. Never give anything by mouth to an unconscious person.

Section 5: Fire-fighting Measures

LEL: UEL:

Extinguishing Media
Regular dry chemical, carbon dioxide, water, or foam suitable for surrounding fire . For large fires, use regular foam or flood with fine water spray.
Specific Hazards Arising from the Chemical
Negligible fire hazard. Oxidizer, This material will react with some metals and cause liberation of oxygen . May ignite or explode on contact with combustible materials. Toxic fumes can be liberated by contact with acid or heat .

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:
Do not touch spilled material. Stop leak if possible without personal risk. For small spills, collect spilled material in appropriate container for disposal and consider absorbing with sand or other noncombustible material (e.g., do not use sawdust or other combustible material). Be advised, however, that the use of absorbing material is creating hazardous waste and this absorbing material must now be disposed of properly. Collect spilled material in appropriate container for disposal.

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 in vented, closed containers that provide protection from direct sunlight. Keep separated from incompatible substances and do not store near acids, heat, or oxidizable materials or organics. When handling, do not mix with other cleaning agents that may liberate chlorine gas vapors.

Section 8: Exposure Control/Personal Protection

Chemical Name / CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits
Sodium hypochlorite 7681-52-9			
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: Light yellow-green liquid	**Odor:** Pungent chlorine-like odor
Vapor Pressure: 14.5 @ 20°C	**Odor threshold:** Unknown
Vapor Density: Unknown	**pH:** Unknown
Density: Unknown	**Melting point:** -20° to -30°F
Freezing point: Unknown	**Solubility:** Unknown
Boiling range: 230°F (110°C)	**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

Incompatibile Materials

Acids, metals, amines, combustible materials, reducing agents. Specific reactions with sodium Hypochlorite include the following:
ACIDS: Violent reaction.
ALUMINUM: Corrosive action.
AMINES: Form explosive chloramines.
AMMONIA: Form explosive chloramines
AMMONIUM SALTS: May form explosive product.
BENZYL CYANIDE (ACIDIFIED): explosive reaction.
ETHYLENEIMINE: Forms explosive 1-chloroethyleneimine.
FORMIC ACID: Explosive mixture.
METHANOL: May form explosive compound.
NITROGEN COMPOUNDS: Forms explosive N-chloro compounds.
ORGANIC AND COMBUSTIBLE MATERIALS: Fire and explosion hazard.
OXALIC ACID: Intense reaction.
REDUCING AGENTS: Fire and explosion hazard
ZINC: Corrosive

Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition . Dangerous gases may accumulate in confined spaces. May ignite or explode on contact with combustible materials.

Hazardous Decomposition Products

Chlorine and Hydrochloric Acid Vapors.

Hazardous Polymerization

Hazardous polymerization will not occur.

Section 11: Toxicology Information

Mixture Toxicity

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

Acute Effects
Ingestion: Causes irritation of membranes of the mouth, throat, and stomach pain and possible ulceration.
Skin Contact: Irritant, reddening of skin, skin damage.
Inhalation: Fumes from spills are very irritating to mucous membranes.
Eye Contact: Extreme irritant, corrosive
Chronic Effects
Eye: Can cause damage.
Skin: Can cause damage, chemical burn.

Carcinogenicity
Not classified or listed by IARC, NTP or OSHA.

CAS Number	Description	% Weight	Carcinogen Rating

Section 12: Ecological Information

Component Ecotoxicity

Sodium hypochlorite	96 Hr LC50 Pimephales promelas: 0.06 - 0.11 mg/L [flow-through]; 96 Hr LC50 Pimephales promelas: 4.5 - 7.6 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 0.4 - 0.8 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 0.28 - 1 mg/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 0.05 - 0.771 mg/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 0.03 - <0.19 mg/L [semi-static]; 96 Hr LC50 Oncorhynchus mykiss: 0.18 - 0.22 mg/L [static] 48 Hr EC50 Daphnia magna: 0.033 - 0.044 mg/L [Static]
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 Informations

Refer to Bill of Lading or container label for DOT or other transportation hazard classification, if any.

Section 15: Regulatory Information

CERCLA/SARA Hazardous Substances
1310-73-2 Sodium hydroxide
7681-52-9 Sodium hypochlorite

TSCA 8(b) Inventory
1310-73-2 Sodium hydroxide
7681-52-9 Sodium hypochlorite

Country	Regulation	All Components Listed

Section 16: Other Information

NSF maximum use level: 84 mg / L

Date Prepared: 6/16/2015

Reviewer Revision

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.