

Printing date 09/19/2014

Reviewed on 09/19/2014

## 1 Identification

- **Product identifier**
- **Trade name: Meras 7909**
- **EPA Registration Number:** 3377-55-81811
- **EPA Establishment Number:** 39959-CA-1
- **Product Use:** Microbiocide
- **Article number:** 7909-7
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Meras Engineering, Inc.  
601 Van Ness Ave. E3-725  
San Francisco, CA 94102  
USA
- **Information department:**  
SDS Coordinator  
(415) 240-4918 or (866) 899-9762  
orders@meras.com
- **Emergency telephone number:** ChemTrec (800) 424-9300 (14228)

## 2 Hazard(s) identification

- **Emergency Overview:**  
DANGER: May cause burning of eyes and irritation of skin. Harmful if swallowed or absorbed through skin. May cause severe irritation to mouth, throat, esophagus and stomach. Avoid contact. Wear splash goggles, gloves and protective apron when handling. Wash thoroughly after handling.  
\*\*\* In the event of incident, please refer to Emergency Response Guide 154. \*\*\*
- **Eye Contact:**  
Exposure to liquid product may cause severe irritation to eyes, and possibly burns or eye damage. Symptoms of exposure may include redness, swelling, tearing or pain. Avoid contact.
- **Skin Contact:**  
Exposure to liquid product may cause moderate to severe irritation to skin, and possible burns. Symptoms of exposure may include redness, itching, swelling or pain. Avoid contact.
- **Ingestion:**  
Exposure to liquid product may cause moderate to severe irritation to inner linings of mouth, esophagus and gastrointestinal tract, and possible burns. Harmful if swallowed. Do NOT ingest.
- **Inhalation:**  
Inhalation of vapors or fumes may be irritating to mucous membranes and respiratory tract; however, inhalation is not believed to be a likely route of exposure. Avoid contact.
- **Chronic:** Unknown
- **Carcinogens:**  
This product and its components are not listed on NTP, IARC, OSHA or ACGIH lists as cancer-causing agents.
- **Aggravation of Pre-Existing Conditions:** Unknown
- **Classification of the substance or mixture**



GHS05 Corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.



GHS07

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Acute Tox. 4 H302 Harmful if swallowed.  
Acute Tox. 4 H312 Harmful in contact with skin.

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**Classification according to Directive 67/548/EEC or Directive 1999/45/EC****Corrosive**

Causes burns.

**Harmful**

Harmful in contact with skin and if swallowed.

**Irritant**

Irritating to respiratory system and skin. Risk of serious damage to eyes.

**Information concerning particular hazards for human and environment:**

The product has to be labeled due to the calculation procedure of international guidelines.

**Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

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**Label elements****Labelling according to EU guidelines:**

The product has been classified and marked in accordance with directives on hazardous materials.

**Code letter and hazard designation of product:****Corrosive****Hazard-determining components of labeling:**Sodium Hydroxide  
Halogenated Complex**Risk phrases:**Harmful in contact with skin and if swallowed.  
Causes burns.  
Irritating to respiratory system and skin.  
Risk of serious damage to eyes.**Safety phrases:**Keep container tightly closed in a cool place.  
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
Wear suitable protective clothing, gloves and eye/face protection.  
This material and its container must be disposed of as hazardous waste.**Classification system:****NFPA ratings (scale 0 - 4)**Health = 3  
Fire = 0  
Reactivity = 0**Special Hazard COR**

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- **HMIS-ratings (scale 0 - 4)**

HEALTH	3	Health = 3
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

- **Personal Protection C**
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

1310-73-2	Sodium Hydroxide	<10.0%
	Halogenated Complex	18.0%

- **Additional information:**

\* NIOSH Immediately Dangerous to Life or Health concentration (IDLH) for sodium hydroxide is 10 mg/m<sup>3</sup>.

### 4 First-aid measures

- **Description of first aid measures**

- **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- **After inhalation:**

In case of unconsciousness place patient stably in side position for transportation.

If this product is inhaled and symptoms occur, move the exposed person to fresh air promptly. If the exposed person is not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Seek medical attention if symptoms persist.

- **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

If this product contacts the skin, immediately flush the affected area with soap and water for at least fifteen (15) minutes. If the product penetrates the clothing, promptly remove the contaminated clothing or shoes, and flush the affected area as described. Get medical attention.

- **After eye contact:**

Rinse opened eye for several minutes under running water. Then consult a doctor.

If this product contacts the eyes, immediately flush eyes with plenty of clean running water for at least fifteen (15) minutes, lifting the upper and lower eyelids occasionally. Remove contact lenses if worn. Get medical attention.

- **After swallowing:**

Immediately call a doctor.

Drink copious amounts of water and provide fresh air. Immediately call a doctor.

If this product is ingested, give the exposed person two (2) glasses of water and seek medical attention promptly. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

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- **Most important symptoms and effects, both acute and delayed**  
Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use water, foam, dry chemical or carbon dioxide to extinguish fire.
- **Special hazards arising from the substance or mixture**  
Irritating vapors may be emitted during a fire. Avoid breathing fumes.  
May evolve hydrogen bromide, bromine, HCl, chlorine and oxides of nitrogen under fire conditions.  
Contact with reactive metals may result in hydrogen gas.
- **Advice for firefighters**
- **Protective equipment:**  
Fire fighters should wear full protective equipment, including a self-contained breathing apparatus.
- **Additional information** Use water to cool containers exposed to a fire.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.  
Use proper personal protection (refer to Section 8).
- **Environmental precautions:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.  
Run off from fire control or dilution water may cause pollution.  
Keep out of drains, municipal sewers, open bodies of water and water course.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralizing agent.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Safely stop source of spill. Clean up spills immediately. Restrict non-essential personnel from the area.  
Wear protective clothing, goggles and respirator if ventilation is not adequate. Dike spill area. For small spills, dilute with water and use a dehalogenating agent such as sodium thiosulfate solution. For large spills, squeegee and collect the spillage or vacuum the spillage. Soak up spill residue with dry chemical absorbent. Place into containers for reuse or disposal. Dispose according to local, state or federal regulations at an approved chemical waste reprocessing facility.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## 7 Handling and storage

- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.

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Prevent formation of aerosols.

Use proper personal protection when handling (refer to Section 8). Use under wellventilated conditions. Avoid contact with eyes, skin and clothing. Avoid breathing vapors and mists. Avoid prolonged or repeated contact. Do NOT ingest. Wash thoroughly after handling. Rinse container before disposal.

 • **Information about protection against explosions and fires:** Protect from heat.

 • **Conditions for safe storage, including any incompatibilities**

 • **Storage:**

 • **Requirements to be met by storerooms and receptacles:**

The recommended storage temperature is above 32F, preferably at room temperature (70F). Precautions should be taken to ensure that the average temperature of the product is maintained below 111F.

 • **Information about storage in one common storage facility:** Not required.

 • **Further information about storage conditions:**

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

Protect from heat and direct sunlight.

Store closed containers in a cool, dry, well-ventilated area away from incompatible materials. Avoid freezing, extreme heat and direct sunlight. Due to build-up of pressure over time, this product is supplied in vented containers. Product should be stored in opaque containers to prevent exposure to light. This product is stable under normal conditions of handling and storage.

 • **Specific end use(s)** No further relevant information available.

 • **Shelf Life**

Product retains 95% of original activity for about one year at normal ambient conditions when properly stored in original containers and protected from light.

## 8 Exposure controls/personal protection

 • **Additional information about design of technical systems:**

General mechanical ventilation is recommended for enclosed areas.

 • **Control parameters**

 • **Components with limit values that require monitoring at the workplace:**

### 1310-73-2 Sodium Hydroxide

 PEL Long-term value: 2 mg/m<sup>3</sup>

 REL Ceiling limit value: 2 mg/m<sup>3</sup>

 TLV Ceiling limit value: 2 mg/m<sup>3</sup>

 • **Additional information:** The lists that were valid during the creation were used as basis.

 • **Exposure controls**

 • **Personal protective equipment:**

 • **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the skin.

Avoid contact with the eyes and skin.

 • **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

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Use of respirator protection is not generally required. However, if exposure is above the stated limits or ventilation is inadequate, use a NIOSH approved acid gas/organic vapor respirator to reduce potential for inhalation exposure. When using respirator cartridges, they must be changed frequently to assure breakthrough exposure does not occur.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Use rubber or plastic gloves to minimize skin contact.

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

To avoid contact with eyes, use chemical splash goggles or a face shield. Eye wash station should be available in the work area.

- **Body protection:**

Use a rubber apron to minimize contact. Rubber boots are recommended. Full drench shower should be available in the work area.

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

<b>Form:</b>	Liquid
<b>Color:</b>	Yellow, Orange
<b>Odor:</b>	Mild
<b>Odor threshold:</b>	Not determined.

- **pH-value at 20 °C (68 °F):** >12.4

- **Specific Gravity** ~ 1.29 - 1.37

- **Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	106 °C (223 °F)
<b>Freezing Point:</b>	-6 °C (21 °F)

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· <b>Flash point:</b>	Not applicable.
· <b>Flammability (solid, gaseous):</b>	Not applicable.
· <b>Ignition temperature:</b>	
<b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
· <b>Vapor pressure at 20 °C (68 °F):</b>	19 mm Hg
· <b>Density:</b>	Not determined.
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with Water:</b>	Fully miscible.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
<b>VOC content:</b>	Non-Volatile
<b>Solids content:</b>	10.0 %
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **Reactivity**
- **Chemical stability** This product is stable at ambient temperatures and atmospheric pressures.
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:**  
Alcohols, aldehydes, strong reducing agents, strong oxidizers, acids, ammonia-containing products and metals (steel, aluminum, iron, copper).
- **Hazardous Polymerization:**  
Hazardous polymerization is not expected to occur under normal temperatures and pressures.
- **Hazardous decomposition products:** Bromine and chlorine

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## 11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

Oral	LD50	2491 mg/kg (Not Specified)
Dermal	LD50	>2000 mg/kg (Not Specified)
Inhalative	LC50/4 h	>20.37 mg/l (Not Specified)

### 1310-73-2 Sodium Hydroxide

Oral	LD50	2000 mg/kg (rat)
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- **Primary irritant effect:**

- **on the skin:**

Caustic effect on skin and mucous membranes.

Irritant to skin and mucous membranes.

Severe to Corrosive

- **on the eye:**

Strong caustic effect.

Strong irritant with the danger of severe eye injury.

Severe to Corrosive

- **Sensitization:** Not a Dermal Sensitizer

- **Other information (about experimental toxicology):** Inhalation Irritation: None to Slight

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

EC50	4.8 mg/kg (Daphnia Magna) (48 hr)
IC50	2.6 mg (Selenastrum Capricornutum) (96 hr)
LC50	4.8 mg (Bluegill Sunfish) (96 hr)

- **Persistence and degradability** No further relevant information available.

- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

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 · **Additional ecological information:**

 · **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

 · **Results of PBT and vPvB assessment**

 · **PBT:** Not applicable.

 · **vPvB:** Not applicable.

 · **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

 · **Waste treatment methods**

 · **US EPA RCRA Status:** This product is considered to be a hazardous waste.

 · **US EPA RCRA Hazardous waste code:** No Data Available

 · **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Do NOT dump into any sewers, on the ground or into any body of water. Rinse containers before disposal. Since emptied containers contain product residue, follow label warnings even after container is emptied. Dispose in accordance with all applicable federal, state and local laws and regulations.

 · **Uncleaned packagings:**

 · **Recommendation:** Disposal must be made according to official regulations.

 · **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport information

 · **UN-Number**

 · **DOT, IMDG, IATA**

UN3266

 · **UN proper shipping name**

 · **DOT**

Corrosive liquid, basic, inorganic, n.o.s. (Sodium hydroxide, Halogenated Complex)

 · **IMDG, IATA**

CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (SODIUM HYDROXIDE, Halogenated Complex)

 · **Transport hazard class(es)**

 · **DOT**

 · **Class**

8 Corrosive substances


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· Label	8
· IMDG, IATA	
	
· Class	8 Corrosive substances
· Label	8
· Packing group	III
· DOT, IMDG, IATA	III
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Corrosive substances
· Danger code (Kemler):	80
· EMS Number:	F-A,S-B
· Segregation groups	Alkalis
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 1 L On cargo aircraft only: 30 L
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN3266, Corrosive liquid, basic, inorganic, n.o.s. (Sodium hydroxide, Halogenated Complex), 8, III

## 15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

### · Section 355 (extremely hazardous substances):

None of the ingredients is listed.

### · Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

### · Section 302 & 303 (Emergency Planning) No Data Available

### · Section 311 & 312 (Hazardous Chemical Inventory)

Hazard Categories: Acute

Planning Threshold: No Data Available

### · TSCA (Toxic Substances Control Act):

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**· Proposition 65**
**· Chemicals known to cause cancer:**

None of the ingredients is listed.

**· Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

**· Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

**· Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

**· CERCLA**

Sodium Hydroxide

Reportable Quantity: 1000 lbs.

RCRA waste number: D002

**· Carcinogenic categories**
**· EPA (Environmental Protection Agency)**

None of the ingredients is listed.

**· IARC (International Agency for Research on Cancer)** Listed by IARC / Group: No

**· NTP (National Toxicology Program)** Listed on NTP Report: No

**· TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

**· NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

**· OSHA-Ca (Occupational Safety & Health Administration)** Regulated by OSHA: No

**· Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

**· Hazard symbols:**


Corrosive

**· Hazard-determining components of labeling:**

Sodium Hydroxide

Halogenated Complex

**· Risk phrases:**

Harmful in contact with skin and if swallowed.

Causes burns.

Irritating to respiratory system and skin.

Risk of serious damage to eyes.

**· Safety phrases:**

Keep container tightly closed in a cool place.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Wear suitable protective clothing, gloves and eye/face protection.

This material and its container must be disposed of as hazardous waste.

**· Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing MSDS:** Environment protection department.

- **Contact:**

SDS Coordinator

Meras Engineering, Inc.

(415) 240-4918 or (866) 899-9762

orders@meras.com

- **Date of preparation / last revision** 09/19/2014 / -

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

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