

**SECTION 1 - IDENTIFICATION**

**Product Identifier:** Meras 3210

**Product Use:** Cooling Water Treatment

**Common Names:**

Meras Engineering, Inc.  
 601 Van Ness Ave. E3-725  
 San Francisco, CA 94102  
 USA  
 (415)240-4918  
 orders@meras.com

**24 Hr. Emergency #:** ChemTrec (800) 424-9300

**SECTION 2 - HAZARDS IDENTIFICATION**

**Classification of the Substance or Mixture:**

Eye Irritation – Category 2  
 Acute Toxicity, Oral – Category 4  
 Skin Irritation – Category 2



**Signal Word:** DANGER

**Hazard Statement(s):**

H302: Harmful if swallowed.  
 H315: Causes skin irritation.  
 H318: Causes serious eye damage.  
 H332: Harmful if inhaled.

**Precautionary Statements:**

**Prevention-**

P261: Avoid breathing dust/fumes/gas/mist/vapors/spray.  
 P264: Wash skin thoroughly after handling.  
 P270: Do not eat, drink, or smoke when using this product.  
 P280: Wear protective gloves/protective clothing/eye protection/face protection.

**Response-**

P301+P312+P330: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.  
 P303+361+353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 P304+P340+P312: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.  
 P305+351+338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.  
 P332+313: If skin irritation occurs: Get medical advice/attention.  
 P362: Take off contaminated clothing and wash before reuse.

**Storage-**

P403+233: Store in a well ventilated place. Keep container tightly closed.  
 P405: Store locked up.

**Disposal-**

P501: Dispose of contents/container to an approved waste disposal plant.

**SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS**

Ingredient(s)	CAS No.	Concentration (%)
POTASSIUM HYDROXIDE	1310-58-3	15-17%

**SECTION 4 - FIRST-AID MEASURES**

<b>Inhalation:</b>	If this product is inhaled, move the exposed person to fresh air promptly. Seek immediate medical attention.
<b>Skin Contact:</b>	Immediately flush with large quantities of water for at least 15 minutes. Remove contaminated clothing under a safety shower. Obtain immediate medical attention.
<b>Eye Contact:</b>	Immediately flush with large quantities of water for at least 15 minutes. Be sure to hold the eyelids open while flushing. Obtain immediate medical attention.
<b>Ingestion:</b>	Do not induce vomiting! If victim is conscious, immediately give large quantities of water. If vomiting does occur, continue to give fluids. Obtain immediate medical attention.
<b>Most Important Symptoms And Effects, Both Acute And Delayed:</b>	Persons with pre-existing skin disorders, eye disease, or cardiopulmonary diseases may be more susceptible to the effects of this substance.
<b>Indication Of Any Immediate Medical Attention And Special Treatment Needed:</b>	No data available.

**SECTION 5 - FIRE-FIGHTING MEASURES**

<b>Suitable Extinguishing Equipment:</b>	Dry Chemical Carbon Dioxide Water Fog Foam
<b>Special Hazards Arising From The Substance Or Mixture:</b>	No data available.
<b>Special Protective Equipment And Precautions For Firefighters:</b>	Avoid breathing fire vapor. Firefighters should wear an approved self-contained breathing apparatus (SCBA). Use water spray to cool unopened containers. Use caution. See Section 7 for more information on safe handling. See Section 8 for more information on personal protection equipment. See Section 13 for disposal information.

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

<b>Personal Precautions, Protective Equipment, And Emergency Procedures:</b>	Wear appropriate PPE. Keep from contacting skin or eyes. Ensure adequate ventilation. Evacuate personnel to safe areas. Stay upwind of spilled material.
<b>Environmental Precautions:</b>	Prevent further release (leakage/spillage) if safe to do so. Do not allow product to enter drains. Do not allow to drain to environment.
<b>Methods And Materials For Containments And Cleaning Up:</b>	Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders,) or pillows, pads, and absorbing berms. Do not use combustible materials such as saw dust! Dispose of contaminated material according to Section 13. Ensure adequate ventilation. Following product recovery, flush area with water.
<b>Reference To Other Sections:</b>	See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for information on proper disposal.

**SECTION 7 - HANDLING AND STORAGE**

- Handling Precautions:** Avoid contact with eyes, skin, or clothing.  
 Keep containers closed when not in use.  
 Do not expose containers to open flame, excessive heat, or direct sunlight.  
 Do not puncture or drop containers.  
 Handle with care and avoid spillage on the floor.  
 Keep material out of reach of children.  
 Keep material away from incompatible materials.  
 Wash thoroughly after handling.  
 Ensure adequate ventilation.
- Storage Requirements:** Keep container tightly closed.  
 Avoid storage in direct sunlight.  
 Store in a well-ventilated place.  
 Protect from extreme cold.
- Incompatible Materials:** Strong oxidizers.

**SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Exposure Limits:**

Component(s)	CAS No.	OSHA			NIOSH		ACGIH	
		PEL	Ceiling	STEL	REL	Ceiling	TLV	Ceiling
Potassium Hydroxide	1310-58-3	2 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>		2 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>

**Engineering Controls:**  
 All ventilation should be designed in accordance with OSHA standard (29 CFR 1910.94).  
 Use local exhaust at filling zones and where leakage and dust formation is probable. Use mechanical (general) ventilation for storage areas.  
 Use appropriate ventilation as required to keep Exposure Limits in Air below TLV & PEL limits.

**Personal Protective Equipment:**  
 All safety equipment should be tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU). Type of protective equipment should be selected based on concentration amount and conditions of use of this material. Full-face vapor respirator may be required as backup to engineering controls when proper engineering controls are not in place to keep TLV and PEL limits below defined thresholds. Respiratory protection must comply with 29 CFR 1910.134.

- Eye/Face-**
- Safety goggles.
  - Full face shield.
- Skin/Body-**
- Gloves (PVC, neoprene, or nitrile).
  - Chemical resistant clothing.
- Respiratory-**
- Air-purifying respirator.
- General Hygiene Considerations-**
- Handle in accordance with good industrial hygiene and safety practice.
  - Keep away from foodstuffs, beverages, and feed.
  - Wash face, hands, and any exposed skin thoroughly after handling.
  - Appropriately dispose of contaminated clothing; wash before re-use, if applicable.
  - Avoid contact with eyes, skin, and clothing.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

- Form:** Liquid  
**Color:** Amber  
**Odor:** Musty  
**pH:** 12.64  
**Melting/Freezing Point:** No data available.
- Vapor Pressure (Mm Hg):** No data available.  
**Vapor Density:** No data available.  
**Relative Density:** 9.84 lbs/gal  
**Specific Gravity:** 1.18  
**Solubility in Water:** 100%

**Initial Boiling Point and Boiling Range:** 212°F.  
**Flash Point:** No data available.  
**Evaporation Rate:** No data available.  
**Flammability (Solid, Gas):** No data available.  
**Upper/Lower Flammability or Explosive Limits:** No data available.

**Partition Coefficient (N-Octanol/Water):** No data available.  
**Auto Ignition Temperature:** No data available.  
**Decomposition Temperature:** No data available.  
**Viscosity:** No data available.  
**Volatiles (% By Weight):** No data available.  
**Volatile Organic Compounds (VOC's):** No data available.

## SECTION 10 - STABILITY AND REACTIVITY

**Reactivity:** Not reactive under normal and ambient conditions.  
**Chemical Stability:** Stable under normal and ambient conditions.  
**Possibility of Hazardous Reactions:** No data available.  
**Conditions to Avoid:** No data is available.  
**Incompatible Materials:** Strong Oxidizers  
**Hazardous Decomposition Products:** No dangerous decomposition product known.

## SECTION 11 - TOXICOLOGICAL INFORMATION

**Routes of Entry:** Eyes, dermal, ingestion.

**Acute Toxicity:**

Potassium Hydroxide

Oral Toxicity (LD<sub>50</sub>)- >273 mg/kg (Rat)

**Primary Eye Irritation:** Strong caustic effect.  
**Primary Skin Irritation:** Strong caustic effect.

**Sensitization:** No data available.

**Carcinogenicity:**

IARC- No ingredients listed.  
ACGIH- No ingredients listed.  
NTP- No ingredients listed.  
OSHA- No ingredients listed.

**Reproductive Toxicity:** No data available.

**Specific Target Organ Toxicity-Single Exposure:** No data available.

**Specific Target Organ Toxicity-Repeated Exposure:** No data available.

**Aspiration Hazard:** No data available.

## SECTION 12 - ECOLOGICAL INFORMATION

**Ecotoxicity:**

Toxicity to Fish (LC<sub>50</sub>)- Mosquito Fish (Gambusia Affinis): 80 mg/L (96 h).

Toxicity to Daphnia and Other Aquatic Invertebrates (EC<sub>50</sub>)- No data available.

**Persistence and Degradability:** No data available.

**Bioaccumulation Potential:** No data available.

**Mobility in Soil:** No data available.

**Results of PBT and vPvB Assessment:** This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).

**Other Adverse Effects:** No data available.

**SECTION 13 - DISPOSAL CONSIDERATIONS**

**Recommendation:** Hazardous wastes shall be managed responsibly.  
 Contact a licensed professional waste disposal service to dispose of this material.  
 Disposal must comply will local, state, and federal regulations.  
 Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of an NPDES permit.

**Cleansing agent:** Water should be used as a cleansing agent to rinse empty containers and/or soiled PPE.

**SECTION 14 - TRANSPORTATION INFORMATION**

**US DOT**

UN Number: 1760  
 Class: 8  
 Packing Group: II  
 Proper Shipping Name: UN1760, Corrosive liquid, n.o.s. (Potassium Hydroxide), 8, PG II  
 Marine Pollutant: No



**IMDG**

UN Number: 1760  
 Class: 8  
 Packing Group: II  
 EMS-No: F-A, S-B  
 Proper Shipping Name: UN1760, Corrosive liquid, n.o.s. (Potassium Hydroxide), 8, PG II



**IATA**

UN Number: 1760  
 Class: 8  
 Packing Group: II  
 Proper Shipping Name: UN1760, Corrosive liquid, n.o.s. (Potassium Hydroxide), 8, PG II



**Limited Quantity:** 1L  
**Excepted Quantity:** (E2) Inner Package: 30g/30mL; Outer Package: 500mg/500mL

**SECTION 15 - REGULATORY INFORMATION**

**EPA Registration No.:**  
**Cal DPR Registration No.:**

<u>Listed Hazardous Chemical</u>	<u>CAS No.</u>	<u>EPCRA EHS</u>		<u>CERCLA HS</u>	<u>CAA 112r</u>	<u>EPCRA 313</u>	<u>Prop 65 Listed</u>
		<u>RQ (lbs)</u>	<u>TPQ (lbs)</u>	<u>RQ (lbs)</u>	<u>TQ (lbs)</u>		
Potassium Hydroxide	1310-58-3			1,000			

Legend

EPCRA- Emergency Planning and Community Right-to-Know Act  
 CERCLA- Comprehensive Environmental Response, Compensation and Liability Act  
 CAA- Clean Air Act  
 RQ- Release Quantity  
 TPQ- Threshold Planning Quantity  
 EPA- Environmental Protection Agency  
 DPR- Department of Pesticide Registration

**SECTION 16 - OTHER INFORMATION**

**NFPA**



NFPA Rating Explanation Guide					
RATING NUMBER	HEALTH HAZARD	FLAMMABILITY HAZARD	INSTABILITY HAZARD	RATING SYMBOL	SPECIAL HAZARD
4	Can be lethal	Will vaporize and readily burn at normal temperatures	May explode at normal temperatures and pressures	ALK	Alkaline
3	Can cause serious or permanent injury	Can be ignited under almost all ambient temperatures	May explode at high temperature or shock	ACID	Acidic
2	Can cause temporary incapacitation or residual injury	Must be heated or high ambient temperature to burn	Violent chemical change at high temperatures or pressures	COR	Corrosive
1	Can cause significant irritation	Must be preheated before ignition can occur	Normally stable. High temperatures make unstable	OX	Oxidizing
0	No hazard	Will not burn	Stable	☸	Radioactive
				☹	Reacts violently or explosively with water
				☹ OX	Reacts violently or explosively with water and oxidizing

**HMIS III**

**2 HEALTH**

**0 FLAMMABILITY**

**0 REACTIVITY**

**F PERSONAL PROTECTION**

PERSONAL PROTECTION INDEX					
A	[Glasses]		G	[Glasses] + [Gloves] + [Respirator]	
B	[Glasses] + [Gloves]		H	[Goggles] + [Gloves] + [Apron] + [Respirator]	
C	[Glasses] + [Gloves] + [Apron]		I	[Glasses] + [Gloves] + [Respirator]	
D	[Goggles] + [Gloves] + [Apron]		J	[Goggles] + [Gloves] + [Apron] + [Respirator]	
E	[Glasses] + [Gloves] + [Respirator]		K	[Goggles] + [Gloves] + [Apron] + [Boots]	
F	[Glasses] + [Gloves] + [Apron] + [Respirator]		X	Consult your supervisor or S.O.P. for "SPECIAL" handling directions	
A	n	o	p	q	r
Safety Glasses	Splash Goggles	Face Shield & Eye Protection	Gloves	Boots	Synthetic Apron
t	u	w	y	z	s
Dust Respirator	Vapor Respirator	Dust & Vapor Respirator	Full Face Respirator	Airline Hood or Mask	Full Suit
					Additional Information

No warranty guarantee or representation is made to the accuracy, reliability, or completeness of this SDS. The information provided in this SDS is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. It is the user's responsibility to satisfy any inquiries as to the suitability of such information for his/her own particular use.