

Printing date 01/02/2015

Reviewed on 11/04/2014

1 Identification

- **Product identifier**
- **Trade name:** Meras 5105
- **Product Use:** Boiler Treatment
- **Article number:** 5105-1
- **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

- **Classification of the substance or mixture**



GHS05 Corrosion

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

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

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



Corrosive

Causes severe burns.



Harmful

Harmful if swallowed.

Contact with acids liberates toxic gas.

- **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.

- **Label elements**

- **Labelling according to EU guidelines:**

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

(Contd. on page 2)

USA

Printing date 01/02/2015

Reviewed on 11/04/2014

Trade name: Meras 5105

(Contd. of page 1)

 · **Code letter and hazard designation of product:**


Corrosive

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

 Potassium Hydroxide
 Sodium Metabisulfite

 · **Risk phrases:**

 Harmful if swallowed.
 Contact with acids liberates toxic gas.
 Causes severe burns.

 · **Safety phrases:**

 Keep in a cool, well-ventilated place, away from metals.
 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 = 2
 Fire = 0
 Reactivity = 0

 · **HMIS-ratings (scale 0 - 4)**

 Health = 2
 Fire = 0
 Reactivity = 0

 · **Personal Protection B**

 · **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:**

7681-57-4	Sodium Metabisulfite	17.0%
1310-58-3	Potassium Hydroxide	10.71%

4 First-aid measures

 · **Description of first aid measures**

 · **General information:**

Immediately remove any clothing soiled by the product.

(Contd. on page 3)

Printing date 01/02/2015

Reviewed on 11/04/2014

Trade name: Meras 5105

(Contd. of page 2)

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.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
Immediately call a doctor.
Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **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.
- **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** Open and handle receptacle with care.
- **Information about protection against explosions and fires:**
Protect from heat.
Keep respiratory protective device available.
- **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)

(Contd. on page 4)

USA

Trade name: Meras 5105

(Contd. of page 3)

Store closed containers in a cool, dry, well-ventilated area with acid-resistant floors. Keep out of direct sunlight and away from water, heat and incompatible materials.

- **Information about storage in one common storage facility:**

Do not store together with acids.
 Do not store together with oxidizing and acidic materials.

- **Further information about storage conditions:**

Keep receptacle tightly sealed.
 Store in cool, dry conditions in well sealed receptacles.
 Protect from heat and direct sunlight.

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

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Control parameters**

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

7681-57-4 Sodium Metabisulfite

REL	Long-term value: 5 mg/m ³
TLV	Long-term value: 5 mg/m ³

1310-58-3 Potassium Hydroxide

REL	Ceiling limit value: 2 mg/m ³
TLV	Ceiling limit value: 2 mg/m ³

- **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 eyes and skin.

- **Breathing equipment:** Not required.

- **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

- **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.

(Contd. on page 5)

Trade name: Meras 5105

(Contd. of page 4)

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

· Form:	Liquid
· Color:	Clear
· Odor:	Mild
· Odor threshold:	Not determined.

· **pH-value at 20 °C (68 °F):** >13

· **Specific Gravity** 1.25

· **Change in condition**

· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	109 °C (228 °F)

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:**

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

· Lower:	Not determined.
· Upper:	Not determined.

· **Vapor pressure:** Not determined.

· **Density:** Not determined.

· **Relative density** Not determined.

· **Vapor density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with**

· **Water:** Fully miscible.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

· Dynamic:	Not determined.
· Kinematic:	Not determined.

· **Solvent content:**

· **Organic solvents:** 0.0 %

· **Solids content:** 10.7 %

(Contd. on page 6)

Printing date 01/02/2015

Reviewed on 11/04/2014

Trade name: Meras 5105

(Contd. of page 5)

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

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** Contact with acids releases toxic gases.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

 · **LD/LC50 values that are relevant for classification:**
1310-58-3 Potassium Hydroxide

Oral	LD50	273 mg/kg (rat)
------	------	-----------------

- **Primary irritant effect:**
- **on the skin:** Strong caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Corrosive
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:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.

(Contd. on page 7)

Printing date 01/02/2015

Reviewed on 11/04/2014

Trade name: Meras 5105

(Contd. of page 6)

 · **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**

 · **Recommendation:**

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

 · **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**

UN1760

 · **UN proper shipping name**

 · **DOT**

 · **IMDG, IATA**

Corrosive liquids, n.o.s. (Potassium hydroxide)

CORROSIVE LIQUID, N.O.S. (POTASSIUM HYDROXIDE)

 · **Transport hazard class(es)**

 · **DOT**

 · **Class**

8 Corrosive substances

 · **Label**

8

 · **IMDG, IATA**

 · **Class**

8 Corrosive substances

(Contd. on page 8)

Printing date 01/02/2015

Reviewed on 11/04/2014

Trade name: Meras 5105

(Contd. of page 7)

· Label	8
· Packing group	
· DOT	III
· IMDG, IATA	II
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Corrosive substances
· Danger code (Kemler):	86
· 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: 5 L On cargo aircraft only: 60 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":	UN1760, Corrosive liquids, n.o.s. (Potassium hydroxide), 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.

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· 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.

(Contd. on page 9)

Printing date 01/02/2015

Reviewed on 11/04/2014

Trade name: Meras 5105

(Contd. of page 8)

· Carcinogenic categories
· EPA (Environmental Protection Agency)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

7681-57-4 Sodium Metabisulfite

A4

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

None of the ingredients is listed.

· 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:

Potassium Hydroxide

Sodium Metabisulfite

· Risk phrases:

Harmful if swallowed.

Contact with acids liberates toxic gas.

Causes severe burns.

· Safety phrases:

Keep in a cool, well-ventilated place, away from metals.

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.

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 SDS: Environment protection department.

· Contact:

SDS Coordinator

Meras Engineering, Inc.

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

orders@meras.com

· Date of preparation / last revision 01/02/2015 / -

· 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)

(Contd. on page 10)

Printing date 01/02/2015

Reviewed on 11/04/2014

Trade name: Meras 5105

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
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

(Contd. of page 9)

USA