

Printing date 11/03/2014

Reviewed on 11/03/2014

1 Identification

- **Product identifier**
- **Trade name: Meras Super Kleen S - Super Kleen Plus**
- **Article number: SKS-4**
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **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**



GHS06 Skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

Carc. 1A H350 May cause cancer.



GHS05 Corrosion

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

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



Toxic

Toxic if swallowed. Toxic: danger of serious damage to health by prolonged exposure through inhalation.



Corrosive

Causes severe burns.



Irritant

Irritating to 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.

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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.

Code letter and hazard designation of product:

Toxic

Hazard-determining components of labeling:

Ammonium Bifluoride
Sulfuric Acid

Risk phrases:

Toxic if swallowed.
Causes severe burns.
Irritating to skin.
Risk of serious damage to eyes.
Toxic: danger of serious damage to health by prolonged exposure through inhalation.

Safety phrases:

When using do not eat or drink.
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.

Hazard description:**WHMIS-symbols:**

D1A - Very toxic material causing immediate and serious toxic effects
D2A - Very toxic material causing other toxic effects
E - Corrosive material

**Classification system:****NFPA ratings (scale 0 - 4)**

Health = 3
Fire = 0
Reactivity = 1

HMIS-ratings (scale 0 - 4)

Health = 3
Fire = 0
Reactivity = 0

Other hazards**Results of PBT and vPvB assessment**

PBT: Not applicable.

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3 Composition/information on ingredients

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

- **Dangerous components:**

7664-93-9	Sulfuric Acid	16.5%
1341-49-7	Ammonium Bifluoride	10.0%

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.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **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:**
Do not induce vomiting; immediately call for medical help.
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** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** No special measures required.
- **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.

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- **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.
 Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **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)
 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:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **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:

7664-93-9 Sulfuric Acid

EL	Long-term value: 0.2 mg/m ³ ACGIH A2; IARC 1
EV	Long-term value: 0.2 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 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.
- **Protection of hands:**



Protective gloves

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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.

- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

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

- **General Information**

- **Appearance:**

Form:	Liquid
Color:	Clear, Amber
Odor:	Acidic
Odor threshold:	Not determined.

- pH-value at 20 °C: < 2

- Specific Gravity 1.18

- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.

- 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 at 20 °C: 1 hPa

- Density: Not determined.

- Relative density: Not determined.

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- | | |
|---|--|
| · Vapor density | Not determined. |
| · Evaporation rate | Not determined. |
| · Solubility in / Miscibility with Water: | Not miscible or difficult to mix. |
| · Partition coefficient (n-octanol/water): | Not determined. |
| · Viscosity: | |
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |
| · Solvent content: | |
| Organic solvents: | 0.0 % |
| · 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** No dangerous reactions known.
- **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:**
- **Primary irritant effect:**
- **on the skin:**
Strong caustic effect on skin and mucous membranes.
Irritant to skin and mucous membranes.
- **on the eye:**
Strong caustic effect.
Strong irritant with the danger of severe eye injury.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Toxic
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)**

7664-93-9	Sulfuric Acid	1
1341-49-7	Ammonium Bifluoride	3

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 · **NTP (National Toxicology Program)**

7664-93-9 Sulfuric Acid

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 · **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.
- **Additional ecological information:**
- **General notes:** Must not reach bodies of water or drainage ditch undiluted or unneutralized.
- **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.

14 Transport information

- | | |
|---|--|
| · UN-Number | UN2817 |
| · DOT, TDG, IMDG, IATA | |
| · UN proper shipping name | Ammonium hydrogendifluoride, solution |
| · DOT | 2817 Ammonium hydrogendifluoride, solution |
| · TDG | AMMONIUM HYDROGENDIFLUORIDE SOLUTION |
| · IMDG, IATA | |
| · Transport hazard class(es) | |
| · DOT | |
|   | |
| · Class | 8 Corrosive substances |


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<ul style="list-style-type: none"> · Label · TDG, IMDG, IATA 	8+6.1 
<ul style="list-style-type: none"> · Class · Label 	8 Corrosive substances 8+6.1
<ul style="list-style-type: none"> · Packing group · DOT, TDG, IMDG, IATA 	III
<ul style="list-style-type: none"> · Environmental hazards: · Marine pollutant: 	No
<ul style="list-style-type: none"> · Special precautions for user · Danger code (Kemler): · EMS Number: · Segregation groups 	Warning: Corrosive substances 80 F-A,S-B Acids
<ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	Not applicable.
<ul style="list-style-type: none"> · Transport/Additional information: · DOT · Quantity limitations 	On passenger aircraft/rail: 1 L On cargo aircraft only: 30 L
<ul style="list-style-type: none"> · TDG · Excepted quantities (EQ) 	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
<ul style="list-style-type: none"> · UN "Model Regulation": 	UN2817, Ammonium hydrogendifluoride, solution, 8 (6.1), III

15 Regulatory information

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

- Section 355 (extremely hazardous substances):

7664-93-9	Sulfuric Acid
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- Section 313 (Specific toxic chemical listings):

7664-93-9	Sulfuric Acid
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- TSCA (Toxic Substances Control Act):

All ingredients are listed.

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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.

· Carcinogenic categories
· EPA (Environmental Protection Agency)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

7664-93-9	Sulfuric Acid	A2
1341-49-7	Ammonium Bifluoride	A4

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

None of the ingredients is listed.

· Canadian substance listings:
· Canadian Domestic Substances List (DSL)

All ingredients are listed.

· Canadian Ingredient Disclosure list (limit 0.1%)

None of the ingredients is listed.

· Canadian Ingredient Disclosure list (limit 1%)

7664-93-9	Sulfuric Acid
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· Product related hazard informations:

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

· Hazard symbols:


Toxic

· Hazard-determining components of labeling:

 Ammonium Bifluoride
 Sulfuric Acid

· Risk phrases:

 Toxic if swallowed.
 Causes severe burns.
 Irritating to skin.
 Risk of serious damage to eyes.
 Toxic: danger of serious damage to health by prolonged exposure through inhalation.

· Safety phrases:

 When using do not eat or drink.
 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.

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· **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 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** 11/03/2014 / -· **Abbreviations and acronyms:**

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)

WHMIS: Workplace Hazardous Materials Information System (Canada)

Acute Tox. 3: Acute toxicity, Hazard Category 3

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

Carc. 1A: Carcinogenicity, Hazard Category 1A

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