

Printing date 09/23/2014

Reviewed on 09/19/2014

1 Identification

- **Product identifier**
- **Trade name: Micro Blast**
- **EPA Registration Number:** 63838-2-81811
- **EPA Establishment Number:** 40270-AZ; 63838-CA-01; 27706-ID; 60156-IL-01
- **Article number:** MB-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)
- **Certification:** OMRI

2 Hazard(s) identification

- **Emergency Overview:**
DANGER! OXIDIZER! CONTACT WITH ORGANIC MATERIALS MAY CAUSE VIOLENT REACTION.
CAUSES EYE, AND SKIN BURNS.
- **Classification of the substance or mixture**



GHS02 Flame

Org. Perox. EF H242 Heating may cause a fire.



GHS05 Corrosion

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



Irritant

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



Oxidizing

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May cause fire.

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.

Code letter and hazard designation of product:

 Corrosive
 Oxidizing

Hazard-determining components of labeling:

Peroxyacetic Acid

Hydrogen Peroxide Solution

Acetic Acid

Risk phrases:

May cause fire.

Harmful if swallowed.

Causes severe 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 = 1

Reactivity = 1

The substance possesses oxidizing properties.

HMIS-ratings (scale 0 - 4)


Health = 3

Fire = 1

Reactivity = 1

Personal Protection D
Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.

vPvB: 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:**

7722-84-1	Hydrogen Peroxide Solution	21-23%
64-19-7	Acetic Acid	14-20%
79-21-0	Peroxyacetic Acid	14-17%

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.
Remove to fresh air. If breathing discomfort occurs and persists, see a medical doctor. If breathing has stopped, give artificial respiration. See medical doctor immediately.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
Remove contaminated clothing and thoroughly wash with soap and water. If irritation occurs and persists, contact a physician.
- **After eye contact:**
Rinse opened eye for several minutes under running water. Then consult a doctor.
Immediately flush with water for at least 15 minutes, lifting upper and lower eyelids intermittently. See a medical doctor immediately.
- **After swallowing:**
Immediately call a doctor.
Drink copious amounts of water and provide fresh air. Immediately call a doctor.
Rinse mouth with water. Dilute by giving 1 or 2 glasses of water. DO NOT induce vomiting. See medical doctor immediately.
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
This product can be corrosive to skin, eyes, and mucous membranes. Consideration should be given to careful endoscopy as stomach or esophageal burns, perforations or strictures may occur. Careful gastric lavage with an endotracheal tube in place should be considered.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Water spray, carbon dioxide, foam.
- **Special hazards arising from the substance or mixture** Oxygen that supports combustion.
- **Advice for firefighters**
Use flooding quantities of water only. Use water spray to keep all containers cool. Fight fire from protected or removed distance. Chemical type extinguishers are not very effective. Use proper personal protective equipment and positive pressure self-contained breathing apparatus.

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- **Protective equipment:** No special measures required.

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6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

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.

Always approach spills from upwind. Small spills may be flushed to an approved sewer line with generous amounts of water. For larger spills, dike well ahead of spill with non-reactive material such as sand. Spill may be neutralized with soda ash (sodium carbonate) broadcasted on surface. Use 1 to 1.5 lb. of soda ash for each gallon of spilled material. The resultant neutralized product will become carbon dioxide and water. Flush material with water and collect for disposal into plastic container. A flush to sewer may be allowed if approved by local authority. Dispose of in accordance with federal, state, or local laws.

Combustible materials should be removed and/or rinsed with water to ensure all residual hydrogen peroxide is removed to the extent possible.

- **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.

Store drums in upright position only. Empty drums as thoroughly as possible. Triple rinse before disposal. Never return product to original container.

- **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:**

Do not store near reducing agents, fuels, organic material, or other non-compatible materials. Store in a cool, dry, well ventilated area. Avoid temperatures that would allow the liquid bulk temperature to rise above 86 F, as slow decay of the active ingredients will occur. **DO NOT STORE IN DIRECT SUNLIGHT**, or near sources of ignition or heat. Use first in, first out storage management. Containers must be vented.

- **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.

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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:**

7722-84-1 Hydrogen Peroxide Solution

PEL Long-term value: 1.4 mg/m³, 1 ppm

REL Long-term value: 1.4 mg/m³, 1 ppm

TLV Long-term value: 1.4 mg/m³, 1 ppm

64-19-7 Acetic Acid

PEL Long-term value: 25 mg/m³, 10 ppm

REL Short-term value: 37 mg/m³, 15 ppm
 Long-term value: 25 mg/m³, 10 ppm

TLV Short-term value: 37 mg/m³, 15 ppm
 Long-term value: 25 mg/m³, 10 ppm

79-21-0 Peroxyacetic Acid

TLV Short-term value: 1.24* mg/m³, 0.4* ppm
 *inhalable fraction + vapor

· **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.
- For normal use as directed, respiratory protection is not required. If handling concentrate product use approved acid/gas cartridge or canister if discomfort occurs. If breakthrough occurs, then use self contained breathing apparatus.

· **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.

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- **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

Use cup type chemical goggles or face shield.

- **Body protection:**

Use synthetic apron and protective clothing and other protective equipment as necessary to prevent skin contact. Heavy rubber or vinyl gloves. Rubber boots, vinyl or rubber protective suit.

9 Physical and chemical properties

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

- **General Information**

- **Appearance:**

Form:	Liquid
Color:	Colorless
Odor:	Pungent
Odor threshold:	Not determined.

- **pH-value at 20 °C (68 °F):** < 1

- **Change in condition**

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

- **Flash point:** 93 °C (199 °F)

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

- **Ignition temperature:** 485 °C (905 °F)

- **Decomposition temperature:** Not determined.

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

- **Danger of explosion:** Not determined.

- **Explosion limits:**

Lower:	4.0 Vol %
Upper:	17.0 Vol %

- **Vapor pressure at 20 °C (68 °F):** 16 hPa (12 mm Hg)

- **Density at 20 °C (68 °F):** 1.13476 g/cm³ (9.47 lbs/gal)

- **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.

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|----------------------------|--|
| · Viscosity: | |
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |
| · Solvent content: | |
| Organic solvents: | 14.2 % |
| VOC content: | 14.2 % |
| | 161.1 g/l / 1.34 lb/gl |
| · Other information | No further relevant information available. |

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
Product is shelf-stable for up to 1 year when stored at room temperatures and not in direct sunlight.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid**
Open flames, elevated temperatures, any source of heat, combustibles such as paper, wood, or leather. Temperatures above 86 F will degrade product, accelerate decomposition, and reduce shelf life.
- **Incompatible materials:**
Dirt, alkali (lye), organics, leather, paper, wood, and all metals except aluminum and stainless steel..
- **Hazardous decomposition products:** Degrades giving off acetic acid and oxygen.

11 Toxicological information

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

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

64-19-7 Acetic Acid

Oral	LD50	3310 mg/kg (rat)
Dermal	LD50	1060 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:**
Strong caustic effect on skin and mucous membranes.
Irritant to skin and mucous membranes.
Corrosive
- **on the eye:**
Strong caustic effect.
Strong irritant with the danger of severe eye injury.
Corrosive
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Corrosive

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Irritant

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

Irritating to respiratory system.

May be harmful if swallowed. Causes burns to mouth, throat and stomach.

· Carcinogenic categories
· IARC (International Agency for Research on Cancer)

7722-84-1	Hydrogen Peroxide Solution	3
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· 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.

· Additional ecological information:
· General notes:

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

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

Danger to drinking water if even small quantities leak into the ground.

Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, 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.

The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with waterways, drains, and sewers. Disposal of this product should comply with the requirements of the local, state or regional environmental authority.

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

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

14 Transport information

<ul style="list-style-type: none"> · UN-Number · DOT, IMDG, IATA 	UN3109
<ul style="list-style-type: none"> · UN proper shipping name · DOT · IMDG, IATA 	Organic peroxide type F, liquid (Peroxyacetic Acid) ORGANIC PEROXIDE TYPE F, LIQUID (Peroxyacetic Acid)
<ul style="list-style-type: none"> · Transport hazard class(es) · DOT 	<div style="display: flex; justify-content: space-around; align-items: center;">   </div>
<ul style="list-style-type: none"> · Class · Label 	5.2 Organic peroxides 5.2+8
<ul style="list-style-type: none"> · IMDG, IATA 	<div style="display: flex; justify-content: space-around; align-items: center;">   </div>
<ul style="list-style-type: none"> · Class · Label 	5.2 Organic peroxides 5.2+8
<ul style="list-style-type: none"> · Packing group · DOT, IMDG, IATA 	II
<ul style="list-style-type: none"> · Environmental hazards: · Marine pollutant: 	No
<ul style="list-style-type: none"> · Special precautions for user 	Warning: Organic peroxides
<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: 10 L On cargo aircraft only: 25 L
<ul style="list-style-type: none"> · UN "Model Regulation": 	UN3109, Organic peroxide type F, liquid (Peroxyacetic Acid), 5.2 (8), II

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15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
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- **Section 355 (extremely hazardous substances):**

7722-84-1	Hydrogen Peroxide Solution
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79-21-0	Peroxyacetic Acid
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- **Section 313 (Specific toxic chemical listings):**

79-21-0	Peroxyacetic Acid
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- **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.

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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

7722-84-1	Hydrogen Peroxide Solution	A3
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- **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
 Oxidizing

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

 Peroxyacetic Acid
 Hydrogen Peroxide Solution
 Acetic Acid

- **Risk phrases:**

 May cause fire.
 Harmful if swallowed.
 Causes severe burns.
 Irritating to respiratory system and skin.
 Risk of serious damage to eyes.

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• 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.**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 09/23/2014 / -**• 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 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)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Org. Perox. EF: Organic Peroxides, Types E, F

Acute Tox. 4: Acute toxicity, Hazard Category 4

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

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