

# SAFETY DATA SHEET

Emission date: 2023-12-11

## Section 1. Identification

**Product name** : Robot Foaming Brush DIS **Code** : 553311041

**Recommended use** : Cleaning of automated milking system brushes

**Restrictions on use** : For professional use only.

**Supplier/Manufacturer** : Grand River Robotics  
598 Glengarry Crescent,  
Fergus, ON N1M 2W8  
Canada  
(266) 383-7678

**Emergency phone (24 hour service)** : Carechem 24 : 1-215-207-0061  
toll free : 1-866-928-0789

## Section 2. Hazard identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Product classification** : OXIDIZING LIQUIDS - Category 2  
ORGANIC PEROXIDES - Type G  
CORROSIVE TO METALS - Category 1  
ACUTE TOXICITY (oral) - Category 4  
SKIN CORROSION - Category 1  
SERIOUS EYE DAMAGE - Category 1  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

**Hazard pictograms** :



**Signal word** : Danger

**Hazard statements** : May intensify fire; oxidizer.  
May be corrosive to metals.  
Harmful if swallowed.  
Causes severe skin burns and eye damage.  
May cause respiratory irritation.

### Precautionary statements

**General** : Keep out of reach of children.

**Prevention** : Wear protective gloves, protective clothing, and eye or face protection. Keep away from heat. No smoking. Keep away from clothing and other combustible materials. Take any precaution to avoid mixing with combustibles. Keep only in original packaging. Use only in a well-ventilated area. Avoid breathing vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

**Response** : Absorb spillage to prevent material damage. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor.  
IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting.  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Immediately call a POISON CENTER or doctor. Wash contaminated clothing before reuse.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

**Storage** : Store locked up. Store in a well-ventilated place. Keep container tightly closed.

**Disposal** : Dispose of contents and container in a waste disposal facility, in accordance with all local, regional and national regulations.

**Other hazards** : None known.

### Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Hazardous ingredients	CAS number	Concentration %
- Hydrogen peroxide	7722-84-1	15 - 30
- Acetic acid	64-19-7	5 - 10
- Peracetic acid	79-21-0	5 - 10
- Sulfuric acid	7664-93-9	1 - 5
- Lauryldimethylamine oxide	1643-20-5	1 - 5

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

### Section 4. First aid measures

#### Description of necessary first aid measures

- Eye contact** : Get medical attention immediately. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- Skin contact** : Get medical attention immediately. Rinse immediately contaminated clothing and skin with plenty of water. Wash contaminated skin with soap and water. Continue to rinse for at least 10 minutes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Remove person to fresh air and keep comfortable for breathing. Maintain an open airway. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. If necessary, call a poison center or physician.
- Ingestion** : Get medical attention immediately. Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel.
- Notes to medical doctor** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

#### Most important symptoms/effects, acute and delayed

The most important known symptoms and effects are described in section 2 and/or in section 11 of this safety data sheet.

### Section 5. Fire-fighting measures

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : None known.

#### Specific hazards arising from the chemical

Oxidizing material. Organic peroxide material that is thermally stable or desensitized. This material increases the risk of fire and may aid combustion. May intensify fire. In a fire or if heated, a pressure increase will occur and the container may burst.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides

#### Advice for firefighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

### Section 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or spray. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

#### Methods and materials for containment and cleaning up

Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Do not absorb in sawdust or other combustible material. It may lead to a fire risk when it dries out. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor.



## Section 7. Handling and storage

### Precautions for safe handling

Put on appropriate personal protective equipment. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or spray. Wash hands thoroughly after handling. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Keep away from clothing, incompatible materials and combustible materials. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container. Absorb spillage to prevent material damage. Manipulate with care, avoid splashes.

### Conditions for safe storage, including any incompatibilities

Do not store above the following temperature: 30°C (86°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store in a corrosion resistant container with a resistant inner liner. Store locked up. Eliminate all ignition sources. Separate from alkalis. Separate from reducing agents and combustible materials. Store away from grease and oil. Keep away from metals. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

##### Hazardous ingredients

	CAS number	Exposure limit values
- Hydrogen peroxide	7722-84-1	ACGIH TLV (United States). TWA: 1,4 mg/m <sup>3</sup> 8 hours. TWA: 1 ppm 8 hours.
- Acetic acid	64-19-7	ACGIH TLV (United States). TWA: 10 ppm TWA: 25 mg/m <sup>3</sup> CEIL: 15 ppm CEIL: 37 mg/m <sup>3</sup> STEL: 15 ppm 15 minutes. STEL: 37 mg/m <sup>3</sup> 15 minutes. NIOSH REL (United States). STEL: 15 ppm 15 minutes. STEL: 37 mg/m <sup>3</sup> 15 minutes. TWA: 10 ppm 10 hours. TWA: 25 mg/m <sup>3</sup> 10 hours. OSHA PEL (United States). TWA: 10 ppm 8 hours. TWA: 25 mg/m <sup>3</sup> 8 hours.
- Peracetic acid	79-21-0	ACGIH TLV (United States). STEL: 1,24 mg/m <sup>3</sup> STEL: 0,4 ppm
- Sulfuric acid	7664-93-9	ACGIH TLV (United States). TWA: 0,2 mg/m <sup>3</sup> OSHA PEL (United States). TWA: 0,1 mg/m <sup>3</sup>

### Appropriate engineering controls

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment. Use with adequate ventilation.

### Personal protective equipment

**Eye/face** : Wear eye protection against chemical splashes.

**Hands** : Wear chemical-resistant, impervious gloves.

**Respiratory** : Wear appropriate respirator when ventilation is inadequate. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

**Other** : Wear appropriate protective clothing to prevent skin contact.

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

## Section 9. Physical and chemical properties

<b>pH</b>	: <1	<b>Physical state</b>	: Liquid. [Transparent liquid.]
<b>Specific gravity</b>	: 1,12 to 1,13	<b>Color</b>	: Colorless.
<b>Odor threshold</b>	: Not available.	<b>Odor</b>	: Pungent vinegar odor
<b>Boiling point</b>	: Not available.		
<b>Melting/freezing point</b>	: -49°C (-56,2°F)		
<b>Vapor pressure</b>	: Not available.		
<b>Vapor density</b>	: Not available.		
<b>Volatility</b>	: Not available.		
<b>Solubility</b>	: Yes. [Miscible in water.]		
<b>Flash point</b>	: Closed cup: >100°C (>212°F) [Product does not sustain combustion.]		
<b>Viscosity</b>	: Not available.		
<b>Evaporation rate</b>	: >1 (butyl acetate = 1)		
<b>Flammability (solid, gas)</b>	: Not available.		
<b>Flammable limits</b>	: Not available.		
<b>Partition coefficient: n-octanol/water</b>	: The product is much more soluble in water.		
<b>Auto-ignition temperature</b>	: Not available.		
<b>Decomposition temperature</b>	: Not available.		

## Section 10. Stability and reactivity

<b>Reactivity</b>	: This product, in laboratory testing, neither detonates in the cavitated state nor deflagrates and shows no effect when heated under confinement nor any explosive power, provided that it is thermally stable or desensitized.
<b>Chemical stability</b>	: The product may not be stable under certain conditions of storage or use.
<b>Possibility of hazardous reactions</b>	: Hazardous reactions or instability may occur under certain conditions of storage or use. Conditions may include the following: contact with combustible materials Reactions may include the following: risk of causing or intensifying fire
<b>Conditions to avoid</b>	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Drying on clothing or other combustible materials may cause fire. Keep away from heat and direct sunlight.
<b>Incompatible materials</b>	: Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Reactive or incompatible with the following materials: alkalis combustible materials reducing materials copper iron rust metals
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

**Likely routes of exposure** : Dermal contact. Eye contact. Inhalation. Ingestion.

### Potential acute health effects

<b>Eye contact</b>	: Causes serious eye damage.
<b>Skin contact</b>	: Causes severe burns.
<b>Inhalation</b>	: May cause respiratory irritation. The inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.
<b>Ingestion</b>	: May cause burns to mouth, throat and stomach. Harmful if swallowed.

### Potentials symptoms related to the physical, chemical and toxicological characteristics

<b>Eye contact</b>	: Pain, watering, redness
<b>Skin contact</b>	: Pain or irritation, redness, blistering may occur
<b>Inhalation</b>	: Adverse symptoms may include the following: respiratory tract irritation, coughing
<b>Ingestion</b>	: Stomach pains

### Potential chronic health effects

<b>Carcinogenic Effects</b>	: Chronic exposure to mists containing sulfuric acid is a cancer hazard.
<b>Mutagenic Effects</b>	: No known significant effects or critical hazards.
<b>Teratogenic Effects</b>	: No known significant effects or critical hazards.
<b>Reproductive effects</b>	: No known significant effects or critical hazards.
<b>Sensitizer</b>	: No known significant effects or critical hazards.



## Numerical measures of acute toxicity

### Hazardous ingredients

- Hydrogen peroxide

- Acetic acid

- Lauryldimethylamine oxide

Species	Result	Dose
Rabbit	LD50 Dermal	>2000 mg/kg
Rat	LD50 Oral	1270 mg/kg
Rat	LD50 Dermal	1060 mg/kg
Mouse	LD50 Oral	4960 mg/kg
Rat	LD50 Oral	3310 mg/kg
Rabbit	LD50 Dermal	521 mg/kg
Rat	LD50 Oral	601 mg/kg

## Section 12. Ecological information

**Ecotoxicity** : This material is toxic to aquatic life.

### Aquatic ecotoxicity:

Hazardous ingredients	Result	Species	Exposure
- Hydrogen peroxide	Acute EC50 2,4 mg/l Acute LC50 16,4 mg/l Acute NOEC 0,63 mg/l	Crustaceans - Daphnia Fish Algae	48 hours 96 hours 72 hours
- Acetic acid	Acute EC50 65 mg/l Acute LC50 75 to 79 mg/l	Daphnia Fish	48 hours 96 hours
- Lauryldimethylamine oxide	Acute LC50 2,6 to 3,5 mg/l	Fish	96 hours

### Persistence and degradability



Not applicable due to rapid degradation of peracetic acid and hydrogen peroxide in the environment.

## Section 13. Disposal considerations

### Waste handling and disposal

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

Reg. info.	UN #	Proper shipping name	Class	Packing group	Label
<b>DOT Classification</b>	UN3149	HYDROGEN PEROXIDE AND PEROXYACETIC ACID MIXTURE with acid(s), water and not more than 5% peroxyacetic acid, STABILIZED	5.1 (8)	II	 

**Marine pollutant (DOT)** : No.

**Additional information (DOT) : Remarks** Limited quantity in 1L or less.

**Reportable quantity (DOT)** : Not applicable.

**Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

## Section 15. Regulatory information

Classification of this product and the SDS have been made in accordance with OSHA Hazard Communication Standard (29 CFR 1910.1200) in force in the United States of America. This product is a mixture for which no specific health effects data exist. The risks have therefore been evaluated based on the physicochemical properties of the product and its composition and may be overestimated.

**Food contact** : Food Industry Compliant.

**US inventory (TSCA 8b)** : All components are listed, exempted or notified.

### SARA 302/304 Components

	CAS #	%	EHS	SARA 302 TPQ (lbs)	SARA 304 RQ (lbs)
- Hydrogen peroxide	7722-84-1	15 - 30	Yes.	1000	1000
- Peracetic acid	79-21-0	5 - 10	Yes.	500	500
- Sulfuric acid	7664-93-9	1 - 5	Yes.	1000	1000

### SARA 313 Components

The following substances are subject to reporting levels established by SARA Title III, section 313 :

- Peracetic acid 79-21-0

### State regulations

**Massachusetts** : The following components are listed: - Hydrogen peroxide; - Acetic acid; - Peracetic acid; - Sulfuric acid

- New York** : The following components are listed: - Acetic acid; - Peracetic acid; - Sulfuric acid
- New Jersey** : The following components are listed: - Hydrogen peroxide; - Acetic acid; - Peracetic acid; - Sulfuric acid
- Pennsylvania** : The following components are listed: - Hydrogen peroxide; - Acetic acid; - Peracetic acid; - Sulfuric acid

This product does not require a Safe Harbor warning under California Prop. 65.

## Section 16. Other information

### Hazardous Material Information System (U.S.A.)

Health	/	3
Flammability		1
Physical hazards		2
Personal protection		¥

¥ The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

### National Fire Protection Association (U.S.A.)



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### Notice to reader

The information provided in this Safety Data Sheet has been compiled from our experience and data presented in various technical publications. The information contained herein is based on the state of our current knowledge of the product concerned. It is the user's responsibility to verify the value of this information for the adoption of required safety measures. We reserve the right to revise Safety Data Sheets from time to time as new technical information becomes available. The user has the responsibility to contact the company to make sure that the Safety Data Sheet he owns is the last published.

Prepared by : Department of Regulatory Affairs of Kersia North America.

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