

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Bio-Oxygen[®] Chem Decon Mixture (Part A&B)
GENERAL USE: Proprietary Chemical and Biological Decontaminate
PRODUCT DESCRIPTION: Proprietary Chemical and Biological Decontaminate
PRODUCT CODE: 23065, 23069, 23070

MANUFACTURER

Artemis Bio-Solutions, LLC
14505 Torrey Chase Blvd Suite 205
Houston, TX 77014, USA

Emergency Contact: INFOTRAC

Emergency Phone: 1(800) 535-5053

Alternate Emergency Phone: 1(352) 323-3500

Customer Service : 1 (630) 359-4090

E-Mail: info@artemisbiosolutions.com

24 HR. EMERGENCY TELEPHONE NUMBERS

AAPCC Poison Help: (800) 424-9300

CANUTEC (Canadian Transportation): (613) 996-6666

INFOTRAC (US Transportation) : (800) 535-5053

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS

Health:

Skin Irritation, Category 2

Eye Irritation, Category 2

Environmental:

Aquatic Toxicity, Category 3

GHS LABEL



SIGNAL WORD: WARNING

HAZARD STATEMENTS

H319: Causes serious eye irritation.

H315: Causes skin irritation.

PRECAUTIONARY STATEMENTS

Prevention:

P264: Wash ... thoroughly after handling.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P363: Wash contaminated clothing before reuse.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy

P332+P313: If skin irritation occurs: Get medical advice/attention.

Storage:

P402+P404: Store in a dry place. Store in a closed container.

Disposal:

P501: Dispose of contents and container in accordance with local regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS
N-alkyl (c12-18)-n,n,-dimethyl-n-benzylammonium Chloride	3-4	68391-01-5
Quaternary Ammonium Cpds., N,n,n,n',n'- Pentamethyl-n'-tallow Alkyl Trimethylenedi-, Chlorides	1-2	68607-29-4
Hydrogen Peroxide	7 - 7.99	7722-84-1
Potassium Carbonate	10	584-08-7
2-propanol	< 1	67-63-0

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

General Advice

Immediate medical attention is required.

Eye Contact

Immediately flush eyes with plenty of water for 15 minutes. Get medical attention, if irritation persists.

Skin Contact

Extended contact may cause irritation or defatting. Flush skin with water for 15 minutes. Get medical attention for any irritation that persists.

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt, or waistband.

Ingestion

May cause a gastric disturbance. Drink lots of water or preferably, milk or juices. Do not induce vomiting. Get medical attention if effects persist.

Self-protection of the first aider

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects

Symptoms

Any additional important symptoms and effects are described in Section 11: Toxicology

Indication of any immediate medical attention and special treatment needed

EYES:

Adverse symptoms may include pain or irritation, watering, and redness.

SKIN:

Adverse symptoms may include irritation and redness.

INGESTION:

Adverse symptoms may include nausea and vomiting.

INHALATION:

Adverse symptoms may include respiratory tract irritation and coughing

Note to physicians

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.
Unsuitable Extinguishing Media	Not Applicable.
Protective equipment and precautions for firefighters	Promptly remove all persons from the vicinity of the incident if there is a fire. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Specific Hazards Arising from the Chemical	The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. In the event of fire and/or explosion do not breathe fumes.
Fire Fighting Equipment	In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. Increases the flammability of combustible, organic and readily oxidizable materials.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions	Wear protective gloves/protective clothing/eye protection/face protection.
Environmental Precautions	WATER SPILL: Avoid dispersal of spilled material and runoff and contact with waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers or waterways). GENERAL PROCEDURES: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil, or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and material for containment and cleaning up

Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Clean-Up	SMALL SPILL: Stop leak if without risk. Move containers from spill area. Dilute with water and mop if water-soluble. Alternately, or if water-soluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. LARGE SPILL: Dike area to contain spill. Wash the spill site with water. See section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling	Use only in a well ventilated area. Do not get in eyes. Do not swallow. Avoid breathing vapor. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. See section 8, Exposure Controls and Personal Protection.
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Conditions for safe storage, including any incompatibilities

Storage Conditions Store in accordance with local regulations. Store in a segregated and approved area in original container protected from sunlight in a dry, cool and well-ventilated and approved area away from incompatible materials. Keep container closed to prevent drying out. Move container away from oxidizing materials. Use appropriate containment to avoid environmental contamination.
STORAGE TEMPERATURE: Store in a cool place below (140) F (60) C.

Incompatible Materials Anionic detergents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	Supplier OEL
2-propanol	TWA 200 ppm 490 mg/m3 400 STEL ppm 960 mg/m3	TWA 400 ppm 980 mg/m3	TWA NL STEL NL

Appropriate engineering controls

Engineering Controls Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only adequate ventilation. Local exhaust ventilation may be necessary for some operations.

Individual protection measures, such as personal protective equipment

Eye/Face Protection *Distribution, Workplace and Household Settings:*
No special protective equipment required.
Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Use appropriate eye protection,

Hand Protection *Distribution, Workplace and Household Settings:*
No special protective equipment required
Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Protective gloves

Skin and Body Protection *Distribution, Workplace and Household Settings:*
No special protective equipment required
Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Wear suitable protective clothing

Respiratory Protection *Distribution, Workplace and Household Settings:*
No special protective equipment required
Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
In case of inadequate ventilation wear respiratory protection

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State Liquid
Appearance Clear to straw liquid
Color Clear to straw
Odor Amine like odor
Odor Threshold Not Determined

Property	Values
pH	11-13
Melting Point/Freezing Point	0 °C (32 °F)
Boiling Point/Boiling Range	100 °C (212 °F)

Flash Point	N/A
Evaporation Rate	1
Flammability (Solid, Gas)	N/A
Upper Flammability Limits	No Information available
Lower Flammability Limit	No Information available
Vapor Pressure	20 mm Hg at 20°C (68°F)
Vapor Density	1.08 lb/ft ³
Specific Gravity	1.06 to 1.07 at 20°C (68°F)
Density:	~ 8.8 at 20°C (68°F)
Water Solubility	Completely soluble
Solubility in other solvents	N/A
Partition Coefficient	No Information available
Auto-ignition Temperature	No Information available
Viscosity	Not yet determined
VOC Content %	None

10. STABILITY AND REACTIVITY

Reactivity	No data available.
Chemical Stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	None under normal processing.
Hazardous Polymerization	Hazardous polymerization does not occur.
Conditions to Avoid	Keep out of reach of children.
Incompatible Materials	Anionic detergents.
Hazardous Decomposition Products	Thermal decomposition may produce toxic vapors/fumes of amines and other organic materials, and oxides of carbon and nitrogen.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Not classified as a human carcinogen.

Eye Contact

Not classified as a human carcinogen.

Skin Contact

Not classified as a human carcinogen.

Inhalation

Not classified as a human carcinogen.

Ingestion

Not classified as a human carcinogen.

Information on physical, chemical and toxicological effects

Symptoms

No Information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity

Not classified as a human carcinogen.

Chronic toxicity

Not classified as a human carcinogen.

12. ECOLOGICAL INFORMATION

Ecotoxicity

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Component Information

No Information available.

Persistence/Degradability

No Information available.

Bioaccumulation

No Information available.

Mobility

No Information available.

Other Adverse Effects

No Information available.

13. ECOLOGICAL INFORMATION

Waste Treatment Methods

Disposal of Wastes

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Do not reuse container

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT Not regulated

IATA Not regulated

IMDG Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA Complies

DSL/NDSL Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

Chemical Name	CAS
N-alkyl (c12-18)-n,n,-dimethyl-n-benzylammonium Chloride	68391-01-5
Quaternary Ammonium Cpds., N,n,n,n',n'- Pentamethyl-n'-tallow Alkyl Trimethylenedi-, Chlorides	68607-29-4
Hydrogen Peroxide	7722-84-1
Potassium Carbonate	584-08-7
2-propanol	67-63-0

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

16. OTHER INFORMATION



NFPA

HMIS Rating

Health	1
Flammability	0
Physical Hazard	0
Personal protection	A

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 Disclaimer

The information provided in this Safety Data Sheet 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, unless specified in the text.

End of Safety Data Sheet