

SAFETY DATA SHEET

according to US Regulation 29 CFR 1910.1200 and the Canadian HPA

Defender HP Disinfectant Wipes

Version 1.5 Revision Date 2021.01.20 Print Date 2021.05.07

SECTION 1. IDENTIFICATION

Product name : Defender HP Disinfectant Wipes

Manufacturer or supplier's details

Company : Artemis Bio-Solutions, LLC

14505 Torrey Chase Blvd., Suite 205

Houston, TX 77014

USA

Telephone : 630-359-4090

E-mail address : info@artemisbiosolutions.com

Emergency telephone number : For incidents only (spill, leak, fire, exposure, or accident), call

CHEMTREC at

1-800-424-9300 (inside North America) [CCN 864796] 1-703-741-5970 (outside North America) [CCN 864796]

+41 61 313 94 94 (24h)

Recommended use of the chemical and restrictions on use

Recommended use : Disinfectants

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture according to US Regulation 29 CFR 1910.1200 and the Canadian HPA.

GHS label elements

Not a hazardous substance or mixture according to US Regulation 29 CFR 1910.1200 and the Canadian HPA.

Based on available data, the classification criteria are not met. Handle in accordance with good industrial hygiene and safety practice. Not a hazardous substance or mixture according to US Regulation 29 CFR 1910.1200 and the Canadian HPA.

Precautionary statements : **Prevention:**

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P262 Do not get in eyes, on skin, or on clothing.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/ protective clothing/ eye protection/

face protection. **Response:**

P314 Get medical advice/ attention if you feel unwell.

Storage:

P402 + P404 Store in a dry place. Store in a closed container. P410 + P403 Protect from sunlight. Store in a well-ventilated

place. **Disposal:**

P501 Dispose of contents/container in accordance with local regu-

lation.



Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

| Chemical name / Synonyms | CAS-No. | Concentration (% w/w) |
|--------------------------|-----------|-----------------------|
| Methanesulphonic acid | 75-75-2 | >= 1 - < 2.5 |
| Hydrogen peroxide | 7722-84-1 | >= 1 - < 2.5 |
| Orthophosphoric acid | 7664-38-2 | >= 0.5 - < 1 |

SECTION 4. FIRST AID MEASURES

If inhaled : Move to fresh air.

If unconscious, place in recovery position and seek medical

advice.

In case of skin contact : Wash with water and soap as a precaution.

If on clothes, remove clothes.

In the case of skin irritation or allergic reactions see a physi-

cian.

In case of eye contact : Flush eyes with water as a precaution.

Remove contact lenses.

Keep eye wide open while rinsing.

Protect unharmed eye.

If eye irritation persists, consult a specialist.

If swallowed : Clean mouth with water and drink afterwards plenty of water.

Never give anything by mouth to an unconscious person.

If symptoms persist, call a physician.

Most important symptoms and ef-

fects, both acute and delayed

No information available.

Notes to physician : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Water spray

Alcohol-resistant foam

Dry chemical

Unsuitable extinguishing media : High volume water jet

Specific hazards during firefighting : Heating or fire can release toxic gas.

Further information : Use water spray to cool unopened containers.

Special protective equipment for

firefighters

: In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.



SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency proce-

dures

Environmental precautions

Use personal protective equipment.

Try to prevent the material from entering drains or water

courses.

Methods and materials for contain-

ment and cleaning up

Neutralize with chalk, alkali solution or ammonia.

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local

/ national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

explosion

Advice on protection against fire and : Normal measures for preventive fire protection.

Advice on safe handling : No special precautions required.

: Keep container tightly closed. Conditions for safe storage

Keep in a well-ventilated place.

Electrical installations / working materials must comply with

the technological safety standards.

To maintain product quality, do not store in heat or direct sun-

light.

Materials to avoid : No special restrictions on storage with other products.

Further information on storage sta-

bility

: No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|----------------------|-----------|-------------------------------------|--|-------------|
| Hydrogen peroxide | 7722-84-1 | | 1.4 mg/m3 | |
| | | TWA | 1 ppm | ACGIH |
| | | REL | 1 ppm 1.4 mg/m3 | NIOSH/GUIDE |
| Orthophosphoric acid | 7664-38-2 | TWA | 1 mg/m3 | ACGIH |
| | | STEL | 3 mg/m3 | ACGIH |
| | | REL | 1 mg/m3 | NIOSH/GUIDE |
| | | STEL | 3 mg/m3 | NIOSH/GUIDE |



Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally re-

quired.

Hand protection

Remarks : Wear protective gloves. Break through time : > 480 min

Eye protection : Safety glasses

Skin and body protection : Choose body protection according to the amount and con-

centration of the dangerous substance at the work place.

Hygiene measures : Handle in accordance with good industrial hygiene and safety

practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : woven fabric

Colour : clear

Odour : Detergent

Odour Threshold : no data available

pH : 1.07 (77 °F / 25 °C)

(undiluted)

Melting point/freezing point : no data available

Boiling point/boiling range : no data available

Flash point : $> 212 \, ^{\circ}\text{F} / > 100 \, ^{\circ}\text{C}$

Evaporation rate : no data available

Flammability (solid, gas) : no data available

Flammability (liquids) : no data available

Self-ignition : no data available

Upper explosion limit : no data available

Lower explosion limit : no data available

Vapour pressure : no data available

Relative vapour density : no data available

Relative density : no data available

Density : 1.017 g/cm3 (68 °F / 20 °C)



Bulk density : no data available

Water solubility : soluble (77 °F / 25 °C)

Partition coefficient: n-octanol/water : no data available

Auto-ignition temperature : no data available

Decomposition temperature : no data available

Viscosity, dynamic : no data available

Viscosity, kinematic : 0.98 mm2/s (77.2 °F / 25.1 °C)

Explosive properties : no data available

Oxidizing properties : no data available

Minimum ignition energy : no data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Stable under recommended storage conditions.

No hazards to be specially mentioned.

Conditions to avoid : Heat

Incompatible materials : Strong acids and strong bases

Oxidizing agents

Hazardous decomposition products : No decomposition if used as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Acute oral toxicity : LD50 (Rat, female): > 5,000 mg/kg

Method: US-EPA

GLP: yes

Acute inhalation toxicity : LC50 (Rat, male and female): > 2.52 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: US-EPA

GLP: yes

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Acute dermal toxicity : LD50 (Rat, male and female): > 5,000 mg/kg

Method: US-EPA

GLP: yes

ARTEMIS BIO-SOLUTIONS

DEFENDER HP DISINFECTANT WIPES

Skin corrosion/irritation

Species: Rabbit Method: US-EPA Result: No skin irritation

GLP: yes

Serious eye damage/eye irritation

Species: Rabbit Result: No eye irritation Method: US-EPA

GLP: yes

Respiratory or skin sensitisation

Species: Guinea pig Method: US-EPA

Result: Not a skin sensitizer.

GLP: yes

Germ cell mutagenicity

Genotoxicity in vitro : Remarks: no data available

Carcinogenicity

Remarks: no data available

IARC No component of this product present at levels greater than or

equal to 0.1% is identified as probable, possible or confirmed

human carcinogen by IARC.

OSHA No component of this product present at levels greater than or

equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or

equal to 0.1% is identified as a known or anticipated carcino-

gen by NTP.

ACGIH Confirmed animal carcinogen with unknown relevance to hu-

mans

Hydrogen peroxide 7722-84-1

Reproductive toxicity

Effects on fertility : Remarks: no data available

STOT - single exposure

Remarks: no data available

STOT - repeated exposure

Remarks: no data available

Aspiration toxicity

No aspiration toxicity classification



Further information

Remarks: no data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxicity to fish : Remarks: no data available

Persistence and degradability

no data available

Bioaccumulative potential

Bioaccumulation : Remarks: no data available

Components:

Methanesulphonic acid:

Partition coefficient: n-octanol/water : log Pow: -4.98

Mobility in soil

Distribution among environmental

compartments

Remarks: no data available

Other adverse effects

Ozone-Depletion Potential : Regulation: US. EPA Clean Air Act (CAA) Section 602 Ozone-

Depleting Substances (40 CFR 82, Subpt. A, App A & B) Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : no data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of contents/container in accordance with local regula-

tion.

Contact waste disposal services.

Contaminated packaging : Empty containers should be taken to an approved waste han-

dling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION



DOT Not dangerous goods

UN number : Not applicable
Proper shipping name : Not applicable
Transport hazard class : Not applicable
Packing group : Not applicable

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TDG Not dangerous goods

UN number: Not applicableProper shipping name: Not applicableTransport hazard class: Not applicablePacking group: Not applicable

IATA Not dangerous goods

UN number : Not applicable
Proper shipping name : Not applicable
Transport hazard class : Not applicable
Packing group : Not applicable

IMDG Not dangerous goods

UN number : Not applicable
Proper shipping name : Not applicable
Transport hazard class : Not applicable
Packing group : Not applicable

ADR Not dangerous goods

UN number : Not applicable
Proper shipping name : Not applicable
Transport hazard class : Not applicable
Packing group : Not applicable

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RID Not dangerous goods

UN number : Not applicable
Proper shipping name : Not applicable
Transport hazard class : Not applicable
Packing group : Not applicable

Special precautions for user : none

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC

Code

: Not applicable

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act CERCLA Reportable Quantity



| Components | CAS-No. | Component RQ (lbs) | Calculated product RQ (lbs) |
|----------------------|-----------|--------------------|-----------------------------------|
| Orthophosphoric acid | 7664-38-2 | 5000 | * |

^{*:} Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

| Components | CAS-No. | Component RQ (lbs) | Calculated product RQ (lbs) |
|-------------------|-----------|-----------------------|-----------------------------|
| Hydrogen peroxide | 7722-84-1 | 1000 | * |

^{*:} Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards

See above: SECTION 2. Hazard Identification-GHS Classification

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

| Components | CAS-No. | Concentration |
|-------------------|-----------|---------------|
| Hydrogen peroxide | 7722-84-1 | >= 1 - < 5 % |

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

This product does not contain any VOC exemptions listed under the U.S. Clean Air Act Section 450.

Clean Water Act

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

| Components | CAS-No. | Component RQ (lbs) |
|----------------------|-----------|-----------------------|
| Orthophosphoric acid | 7664-38-2 | 5000 |

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

| Components | CAS-No. | Concentration |
|----------------------|-----------|----------------|
| Orthophosphoric acid | 7664-38-2 | >= 0.1 - < 1 % |

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307



US State Regulations

Massachusetts Right To Know

| Components | CAS-No. |
|-------------------|-----------|
| Hydrogen peroxide | 7722-84-1 |

Pennsylvania Right To Know

| Components | CAS-No. |
|------------|-----------|
| Water | 7732-18-5 |

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Canadian lists

NPRI

Canadian National Pollutant Release Inventory (NPRI): No component is listed on NPRI.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH : US. ACGIH Threshold Limit Values

NIOSH/GUIDE : US. NIOSH: Pocket Guide to Chemical Hazards, as amended

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 -Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation,



Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date : 2021.01.20

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.

Date format : yyyy/mm/dd

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