ViveStep

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Issue date: 2022-12-06
Revision date: 2022-12-06
Version: 1.1

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : ViveStep
EPA Registration # : 63761-10

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Disinfectant

1.3. Supplier

Manufacturer
Sterilex LLC
111 Lake Front Dr
Hunt Valley, MD 21030 - USA
T 443-541-8800

1.4. Emergency telephone number

Emergency number : ChemTel LLC (800)255-3924 (North America); +1 (813)248-0585 (International)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS classification

Acute Tox. 4 (Oral)
Skin Irrit. 2
Eye Dam. 1

2.2. GHS Label elements, including precautionary statements

GHS labelling

Hazard pictograms (GHS) :

Signal word (GHS) : Danger
Hazard statements (GHS) : H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H318 - Causes serious eye damage
Precautionary statements (GHS) : P264 - Wash face, hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product
P280 - Wear eye protection, face protection, protective clothing, protective gloves.
P301+P312 -If swallowed: Call a poison center or doctor if you feel unwell.
P330 - Rinse mouth.
P302+P352 - If on skin: Wash with plenty of water.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 - Immediately call a poison center or doctor.
P501 - Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity

73.8% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral)

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Chemical name / Synonyms	Product identifier	%
Sodium percarbonate	Carbonic acid disodium salt, compound with hydrogen peroxide (H2O2) (2:3) / Carbonic acid, disodium salt, compound with hydrogen peroxide (H2O2) (2:3) / Disodium carbonate, compound with hydrogen peroxide (2:3) / Sodium carbonate peroxide / Sodium carbonate peroxyhydrate / SODIUM CARBONATE PEROXIDE / Carbonic acid disodium salt, compound with hydrogen peroxide (2:3) / Carbonic acid, disodium salt, compound with hydrogen peroxide (2:3) / Sodium percarbonate peroxyhydrate / Carbonic acid sodium salt (1:2), compound with hydrogen peroxide (H2O2) (2:3) / Disodium carbonate, hydrogen peroxide (2:3) / Disodium peroxocarbonate / Compound of sodium carbonate with hydrogen peroxide (2:3) / Compound of sodium carbonate with hydrogen peroxide(2:3)	CAS-No.: 15630-89-4	7 – 13
Disodium carbonate	Sodium carbonate / Carbonic acid, disodium salt / Soda ash / Sodium carbonate (2:1) / Sodium carbonate, anhydrous / Carbonic acid sodium salt (1:2) / SODIUM CARBONATE / Bisodium carbonate / Sodium carbonate anhydrous / sodium carbonate	CAS-No.: 497-19-8	3 – 7
Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)-, tetrasodium salt	Tetrasodium ethylenediaminetetraacetate / Ethylenediaminetetraacetic acid, tetrasodium salt / N,N'-1,2-Ethanediylbis(N-(carboxymethyl)glycine) tetrasodium salt / Tetrasodium ethylene diamine tetraacetate / edetate sodium / Edetate sodium / Tetrasodium edetate / EDTA, tetrasodium / Acetic acid, (ethylenedinitrilo)tetra-, tetrasodium salt / Tetrasodium salt of ethylenediaminetetraacetic acid / EDTA tetrasodium salt / TETRASODIUM EDTA / Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)-, tetrasodium salt / Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)-, sodium salt (1:4) / Tetrasodium 2,2',2'',2'''-(ethylenedinitrilo)tetraacetate	CAS-No.: 64-02-8	1 – 5

Name	Chemical name / Synonyms	Product identifier	%
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	Benzyl-C12-16-alkyldimethylammonium chloride / Quaternary ammonium compounds, benzylalkyl(C12-16)dimethyl, chlorides / Benzylkonium chloride / Alkyl (C12-16) dimethylbenzylammonium chloride / Benzyl[alkyl(C12-16)]dimethylammonium chloride / Alkyl(C12-16)dimethylbenzylammonium chloride / Benzyl-C12-16-alkyldimethyl, chlorides / Alkyl(C12-16)dimethylbenzyl ammonium chloride / Benzyl(C12-16) alkyldimethyl, chlorides / Benzyl-C12-16-alkyldimethyl, chloride / Quaternary ammonium compounds, benzyl C12-16 (even numbered)-alkyldimethyl chlorides / Alkyl(C12-16)(benzyl)(dimethyl)ammonium chloride	CAS-No.: 68424-85-1	1 – 5

***Chemical name, CAS number and/or exact concentration have been withheld as a trade secret**

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact : IF ON SKIN: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : 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/doctor.

First-aid measures after ingestion : IF SWALLOWED: Rinse mouth. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Call a POISON CENTER/doctor if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : May cause irritation to the respiratory tract.

Symptoms/effects after skin contact : Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

Symptoms/effects after eye contact : Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns.

Symptoms/effects after ingestion : Harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

4.3. Immediate medical attention and special treatment, if necessary

Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media : Do not use water jet.

5.2. Specific hazards arising from the chemical

Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon. Irritating vapours.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray to cool exposed surfaces.

Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain spill, then place in a suitable container. Minimize dust generation. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for cleaning up : Vacuum or sweep material and place in a disposal container. Avoid dust formation. Provide ventilation.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. If medical advice is needed, have product container or label at hand. Keep container tightly closed when not in use. Avoid generating dust. Good housekeeping is important to prevent accumulation of dust.

Hygiene measures : Wash contaminated clothing before reuse. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep out of the reach of children. Keep container tightly closed. Store in a dry, cool and well-ventilated place. Containers which are opened should be properly resealed and kept upright to prevent leakage.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

ViveStep

No additional information available

Sodium percarbonate (15630-89-4)

No additional information available

Disodium carbonate (497-19-8)

No additional information available

Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)-, tetrasodium salt (64-02-8)
No additional information available

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides (68424-85-1)
No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station. Provide readily accessible eye wash stations and safety showers. Provide readily accessible eye wash stations and safety showers.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:
Wear suitable gloves resistant to chemical penetration

Eye protection:
Wear eye/face protection

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Other information:
Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Powder.
Colour	:	Blue to light blue
Odour	:	Odourless
Odour threshold	:	No data available
pH	:	No data available
pH solution	:	8.7 – 9.7 (1% Solution)
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Flammability	:	No data available
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	No data available
Solubility	:	Soluble.
Partition coefficient n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available

Viscosity, dynamic : No data available
Explosive limits : No data available
Explosive properties : Product does not present an explosion hazard.
Oxidising properties : No data available

9.2. Other information

Bulk density : 1.155 g/mL

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Heat. Direct sunlight. Dust formation. Moisture. Incompatible materials.

10.5. Incompatible materials

Strong acids.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon. Oxygen. Chlorine compounds. Nitrogen oxides. Irritating fumes.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.
Acute toxicity (dermal) : Not classified.
Acute toxicity (inhalation) : Not classified.

ViveStep	
LD50 oral rat	500 – 500 mg/kg
LD50 dermal rabbit	2000 – 5000
LC50 inhalation rat	> 2 mg/l
Unknown acute toxicity (GHS CA)	73.8% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral)

Sodium percarbonate (15630-89-4)	
LD50 oral rat	1034 mg/kg
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: other:EPA Guideline
ATE CA (oral)	1034 mg/kg bodyweight

Disodium carbonate (497-19-8)	
LD50 oral rat	4090 mg/kg

Disodium carbonate (497-19-8)	
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: other:EPA 16 CFR 1500.40
ATE CA (oral)	4090 mg/kg bodyweight

Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)-, tetrasodium salt (64-02-8)	
LD50 oral rat	1658 mg/kg
ATE CA (oral)	1210 mg/kg bodyweight

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides (68424-85-1)	
LD50 oral rat	426 mg/kg
ATE CA (oral)	426 mg/kg bodyweight

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye damage.
Respiratory or skin sensitisation : Not classified.
Germ cell mutagenicity : Not classified.
Carcinogenicity : Not classified.
Reproductive toxicity : Not classified.
STOT-single exposure : Not classified.
STOT-repeated exposure : Not classified.

Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)-, tetrasodium salt (64-02-8)	
LOAEC (inhalation, rat,dust/mist/fume, 90 days)	0.015 mg/l air Animal: rat, Animal sex: female, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)
NOAEL (oral, rat, 90 days)	≥ 500 mg/kg bodyweight Animal: rat

Polyethylene glycol (25322-68-3)	
LOAEL (oral, rat, 90 days)	16000 mg/kg bodyweight Animal: rat, Guideline: other:
NOAEL (oral, rat, 90 days)	8000 mg/kg bodyweight Animal: rat, Guideline: other:
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	1 mg/l air Animal: rat, Guideline: other:

Aspiration hazard : Not classified.
Symptoms/effects after inhalation : May cause irritation to the respiratory tract.
Symptoms/effects after skin contact : Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.
Symptoms/effects after eye contact : Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns.
Symptoms/effects after ingestion : Harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Other information : Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

Sodium percarbonate (15630-89-4)	
LC50 - Fish [1]	70.7 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 - Crustacea [1]	4.9 mg/l Test organisms (species): Daphnia pulex

Disodium carbonate (497-19-8)	
LC50 - Fish [1]	300 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

Disodium carbonate (497-19-8)	
EC50 - Crustacea [1]	265 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 - Fish [2]	310 – 1220 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 - Crustacea [2]	200 – 227 mg/l Test organisms (species): Ceriodaphnia sp.

Glycine, N,N'-1,2-ethanediylbis[N-(carboxymethyl)-, tetrasodium salt (64-02-8)	
LC50 - Fish [1]	41 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 - Crustacea [1]	140 mg/l Test organisms (species): Daphnia magna
LC50 - Fish [2]	59.8 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
ErC50 algae	1.01 mg/l
LOEC (chronic)	50 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	25 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	≥ 25.7 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio) Duration: '35 d'

Polyethylene glycol (25322-68-3)	
LC50 - Fish [1]	> 100 mg/l Test organisms (species): Poecilia reticulata
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna
NOEC (chronic)	17475.27 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	13671.59 mg/l Test organisms (species): other: Duration: '28 d'

12.2. Persistence and degradability

ViveStep	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

ViveStep	
Bioaccumulative potential	Not established.

Sodium percarbonate (15630-89-4)	
BCF - Fish [1]	(no bioaccumulation)

Disodium carbonate (497-19-8)	
BCF - Fish [1]	(no bioaccumulation)

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : No other effects known.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

14.1. UN number

Not regulated for transport

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Not applicable
Proper Shipping Name (TDG) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable

14.3. Transport hazard class(es)

DOT
Transport hazard class(es) (DOT) : Not applicable

TDG
Transport hazard class(es) (TDG) : Not applicable

IMDG
Transport hazard class(es) (IMDG) : Not applicable

IATA
Transport hazard class(es) (IATA) : Not applicable

14.4. Packing group

Packing group (DOT) : Not applicable
Packing group (TDG) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

Special transport precautions : Do not handle until all safety precautions have been read and understood.

DOT
No data available

TDG
No data available

IMDG
No data available

IATA
No data available

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

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

FIFRA Labeling	
EPA Registration Number	63761-10

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Refer to product label for hazards and precautionary statements.

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories

Health Canada Labeling	
Product Registration Number	Not applicable

Read the label, authorized under the Food and Drug Act, prior to using or handling the product.

This product is regulated by Health Canada and is subject to certain labeling requirements under the Food and Drug Act. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. The following is the hazard information required on the product's label:

15.2. International regulations

No additional information available

15.3. US State regulations

⚠ WARNING: This product can expose you to Ethylene oxide, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

SECTION 16: Other information

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

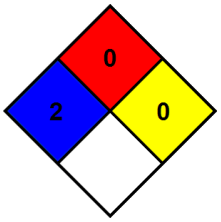
Revision date : 12/06/2022
Other information : None.
Prepared by : Nexreg Compliance Inc.
www.Nexreg.com

Full text of H-statements	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

SDS HazCom 2012 - WHMIS 2015 (Nexreg) 2021