

Smartcide 510

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Issue date: 12/13/2024 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : Smartcide 510

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

Smart Chemical Solutions, LLC
3505 Olsen Blvd
Suite 201
Amarillo, TX 79109
T (806) 367-8031

1.4. Emergency telephone number

Emergency number : CHEMTREC 1-800-424-9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Acute toxicity (oral) Category 4	H302	Harmful if swallowed
Acute toxicity (inhalation:dust,mist) Category 2	H330	Fatal if inhaled
Serious eye damage/eye irritation Category 1	H318	Causes serious eye damage
Respiratory sensitization, Category 1	H334	May cause an allergy or asthma symptoms or breathing difficulties if inhaled
Skin sensitization, Category 1	H317	May cause an allergic skin reaction
Specific target organ toxicity (repeated exposure) Category 2	H373	May cause damage to organs through prolonged or repeated exposure
Hazardous to the aquatic environment - Acute Hazard Category 1	H400	Very toxic to aquatic life
Hazardous to the aquatic environment - Chronic Hazard Category 3	H412	Harmful to aquatic life with long lasting effects

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

H302 - Harmful if swallowed
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H330 - Fatal if inhaled
H334 - May cause an allergy or asthma symptoms or breathing difficulties if inhaled
H373 - May cause damage to organs through prolonged or repeated exposure
H400 - Very toxic to aquatic life
H412 - Harmful to aquatic life with long lasting effects

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Precautionary statements (GHS US) :

- P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
- P261 - Avoid breathing dust, fume, gas, mist, vapors, spray.
- P264 - Wash hands, forearms and face thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P271 - Use only outdoors or in a well-ventilated area.
- P272 - Contaminated work clothing must not be allowed out of the workplace.
- P273 - Avoid release to the environment.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P284 - [In case of inadequate ventilation] wear respiratory protection.
- P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell.
- P302+P352 - If on skin: Wash with plenty of water.
- P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.
- P304+P341 - If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
- 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.
- P314 - Get medical advice/attention if you feel unwell.
- P320 - Specific treatment is urgent (see supplemental first aid instruction on this label).
- P321 - Specific treatment (see supplemental first aid instruction on this label).
- P330 - Rinse mouth.
- P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
- P342+P311 - If experiencing respiratory symptoms: Call a poison center or doctor.
- P363 - Wash contaminated clothing before reuse.
- P391 - Collect spillage.
- P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
- P405 - Store locked up.
- P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

20% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)
10% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Glutaraldehyde	CAS-No.: 111-30-8	5 – 10	Acute Tox. 3 (Oral), H301 Acute Tox. 2 (Inhalation), H330 Skin Corr. 1B, H314 Resp. Sens. 1, H334 Skin Sens. 1A, H317 STOT SE 3, H335 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 2, H411

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Name	Product identifier	%	GHS US classification
Quaternary ammonium compounds, benzyl-C12-16 alkyldimethyl, chlorides	CAS-No.: 68424-85-1	5 – 10	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	: Call a physician immediately.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a physician immediately. Call a doctor.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Rinse mouth. Call a poison center/doctor/physician if you feel unwell.

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

Symptoms/effects after inhalation	: May cause an allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact	: May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Serious damage to eyes.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Do not breathe dust/fume/gas/mist/vapors/spray. Only qualified personnel equipped with suitable protective equipment may intervene.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

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6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.
Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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No additional information available

Glutaraldehyde (111-30-8)

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.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Wear respiratory protection.

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Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear.
Color	: Colorless
Odor	: Mixture contains one or more component(s) which have the following odour:
Odor threshold	: No data available
pH	: 3 – 6
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 1.01
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

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

None under recommended storage and handling conditions (see section 7).

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10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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

Smartcide 510	
ATE US (oral)	1361.022 mg/kg body weight
ATE US (dust, mist)	0.5 mg/l/4h
Unknown acute toxicity (GHS US)	20% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 10% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

Glutaraldehyde (111-30-8)	
LD50 oral rat	200 mg/kg Source: ECHA
LD50 dermal rabbit	> 2000 mg/kg Source: ECHA
LC50 Inhalation - Rat (Vapours)	0.28 – 0.39 mg/l Source: ECHA
ATE US (oral)	200 mg/kg body weight
ATE US (gases)	100 ppmV/4h
ATE US (vapors)	0.28 mg/l/4h
ATE US (dust, mist)	0.05 mg/l/4h

Quaternary ammonium compounds, benzyl-C12-16 alkyldimethyl, chlorides (68424-85-1)	
LD50 oral rat	426 mg/kg Source: National Library of Medicine
ATE US (oral)	426 mg/kg body weight

Skin corrosion/irritation : Not classified
pH: 3 – 6

Serious eye damage/irritation : Causes serious eye damage.
pH: 3 – 6

Respiratory or skin sensitization : May cause an allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

Glutaraldehyde (111-30-8)	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Glutaraldehyde (111-30-8)	
LOAEC (inhalation, rat, gas, 90 days)	0.25 ppm Animal: rat, Remarks on results: other:

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Glutaraldehyde (111-30-8)

NOAEL (dermal, rat/rabbit, 90 days)	150 mg/kg body weight Animal: rat, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study), Guideline: EPA OPPTS 870.3250 (Subchronic Dermal Toxicity 90 Days)
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STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
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Aspiration hazard : Not classified
Viscosity, kinematic : No data available

Glutaraldehyde (111-30-8)

Viscosity, kinematic	12.75 mm ² /s Temp.: 'other:' Parameter: 'kinematic viscosity (in mm ² /s)'
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Symptoms/effects after inhalation : May cause an allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact : May cause an allergic skin reaction.
Symptoms/effects after eye contact : Serious damage to eyes.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Very toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Glutaraldehyde (111-30-8)

LC50 - Fish [1]	0.8 mg/l Source: ECHA
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EC50 72h - Algae [1]	1.2 mg/l Source: ECHA
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Quaternary ammonium compounds, benzyl-C12-16 alkyldimethyl, chlorides (68424-85-1)

LC50 - Fish [1]	0.51 mg/l Source: The ECOTOXicology database
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EC50 - Crustacea [1]	0.0059 mg/l Source: The ECOTOXicology database
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EC50 96h - Algae [1]	4.813 mg/l Source: Ecological Structure Activity Relationships
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12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Glutaraldehyde (111-30-8)

Partition coefficient n-octanol/water (Log Pow)	-0.36 Source: ECHA
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Quaternary ammonium compounds, benzyl-C12-16 alkyldimethyl, chlorides (68424-85-1)

Partition coefficient n-octanol/water (Log Pow)	3.91 Source: Quantitative Structure Activity Relation
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12.4. Mobility in soil

Quaternary ammonium compounds, benzyl-C12-16 alkyldimethyl, chlorides (68424-85-1)

Mobility in soil	1002 Source: EPI Suite
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12.5. Other adverse effects

No additional information available

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SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

DOT	IMDG	IATA
14.1. UN number		
1903	1903	1903
14.2. Proper Shipping Name		
Disinfectants, liquid, corrosive n.o.s. (Quaternary ammonium compounds)	DISINFECTANT, LIQUID, CORROSIVE, N.O.S. (Quaternary ammonium compounds)	Disinfectant, liquid, corrosive, n.o.s. (Quaternary ammonium compounds)
14.3. Transport hazard class(es)		
8	8	8
		
14.4. Packing group		
II	II	II
14.5. Environmental hazards		
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes
No supplementary information available		

14.6. Special precautions for user

DOT	
UN-No.(DOT)	: UN1903
DOT Special Provisions (49 CFR 172.102)	: B2 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks are not authorized. IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3) TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 154
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 202
DOT Packaging Bulk (49 CFR 173.xxx)	: 242

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DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 1 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 30 L
DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

IMDG

Special provision (IMDG) : 274
Limited quantities (IMDG) : 1 L
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P001
IBC packing instructions (IMDG) : IBC02
EmS-No. (Fire) : F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage) : S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES
Stowage category (IMDG) : B
Properties and observations (IMDG) : A wide variety of corrosive liquids. Causes burns to skin, eyes and mucous membranes.

IATA

PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y840
PCA limited quantity max net quantity (IATA) : 0.5L
PCA packing instructions (IATA) : 851
PCA max net quantity (IATA) : 1L
CAO packing instructions (IATA) : 855
CAO max net quantity (IATA) : 30L
Special provision (IATA) : A3, A803
ERG code (IATA) : 8L

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 present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

Glutaraldehyde	CAS-No. 111-30-8	5 – 10%
Quaternary ammonium compounds, benzyl-C12-16 alkyldimethyl, chlorides	CAS-No. 68424-85-1	5 – 10%

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

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National regulations

No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of H-phrases

H301	Toxic if swallowed
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H330	Fatal if inhaled
H334	May cause an allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

Safety Data Sheet (SDS), USA