

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : Smartcide 1203

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
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

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
H318 - Causes serious eye damage
H334 - May cause an allergy or asthma symptoms or breathing difficulties if inhaled

Precautionary statements (GHS US) : P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P270 - Do not eat, drink or smoke when using this product.
P264 - Wash hands, forearms and face thoroughly after handling.
P262 - Do not get in eyes, on skin, or on clothing.
P261 - Avoid breathing dust, fume, gas, mist, vapors, spray.

2.3. Other hazards which do not result in classification

No additional information available

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2.4. Unknown acute toxicity (GHS US)

14.2% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)

3.2% 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	11.4 – 12.6	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
Quaternary ammonium compounds, benzyl-C12-16 alkyldimethyl, chlorides	CAS-No.: 68424-85-1	1.4 – 1.6	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400
1-Decanaminium, N-decyl-N, N-dimethyl-, chloride (1:1)	CAS-No.: 7173-51-5	1.4 – 1.6	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Eye Dam. 1, H318 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	: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a physician immediately.
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. Do not induce vomiting. Call a physician immediately.

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	: Burns. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Burns.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

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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

Fire hazard : Flammable liquid and vapor.
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 : No open flames, no sparks, and no smoking. 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.

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. Notify authorities if product enters sewers or public waters.
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 : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes.
Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. 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

Technical measures : Ground/bond container and receiving equipment.

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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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No additional information available

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

No additional information available

Glutaraldehyde (111-30-8)

No additional information available

1-Decanaminium, N-decyl-N, N-dimethyl-, chloride (1:1) (7173-51-5)

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.

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

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Odor	: There may be no odour warning properties, odour is subjective and inadequate to warn of overexposure. Mixture contains one or more component(s) which have the following odour: Stuffy odour
Odor threshold	: No data available
pH	: No data available
pH solution	: 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	: No data available
Density	: 8.6
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

Flammable liquid and vapor.

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

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

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.

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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.

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ATE US (oral)	1396.276 mg/kg body weight
ATE US (dust, mist)	0.397 mg/l/4h
Unknown acute toxicity (GHS US)	14.2% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 3.2% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

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

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

1-Decanaminium, N-decyl-N, N-dimethyl-, chloride (1:1) (7173-51-5)

LD50 oral rat	329 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male / female, QSAR, Oral)
LD50 dermal rat	> 1000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, Rat, Male / female, Experimental value, Dermal)
LD50 dermal rabbit	≈ 3342 mg/kg body weight Animal: rabbit, Guideline: other., Remarks on results: other., 95% CL: 0 - 4292
ATE US (oral)	329 mg/kg body weight
ATE US (dermal)	1100 mg/kg body weight

Skin corrosion/irritation : Causes severe skin burns.

1-Decanaminium, N-decyl-N, N-dimethyl-, chloride (1:1) (7173-51-5)

pH	6.8 (1 %, 25 °C)
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Serious eye damage/irritation : Causes serious eye damage.

1-Decanaminium, N-decyl-N, N-dimethyl-, chloride (1:1) (7173-51-5)

pH	6.8 (1 %, 25 °C)
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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

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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:
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)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

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)'

1-Decanaminium, N-decyl-N, N-dimethyl-, chloride (1:1) (7173-51-5)	
Viscosity, kinematic	≈ 24.5 mm ² /s Temp.: '20°C' Parameter: 'kinematic viscosity (in mm ² /s)'

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

SECTION 12: Ecological information

12.1. Toxicity

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

Quaternary ammonium compounds, benzyl-C12-16 alkyldimethyl, chlorides (68424-85-1)	
LC50 - Fish [1]	0.51 mg/l Source: The ECOTOXicology database
EC50 - Crustacea [1]	0.0059 mg/l Source: The ECOTOXicology database
EC50 96h - Algae [1]	4.813 mg/l Source: Ecological Structure Activity Relationships

Glutaraldehyde (111-30-8)	
LC50 - Fish [1]	0.8 mg/l Source: ECHA
EC50 72h - Algae [1]	1.2 mg/l Source: ECHA

1-Decanaminium, N-decyl-N, N-dimethyl-, chloride (1:1) (7173-51-5)	
LC50 - Fish [1]	1 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Experimental value)
EC50 - Crustacea [1]	0.057 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Experimental value, Locomotor effect)
LC50 - Fish [2]	≈ 0.49 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [2]	≈ 0.029 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	0.025 mg/l Source: ECHA
ErC50 algae	0.062 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Growth)
LOEC (chronic)	≈ 0.047 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

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1-Decanaminium, N-decyl-N, N-dimethyl-, chloride (1:1) (7173-51-5)

NOEC (chronic)	≈ 0.021 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
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12.2. Persistence and degradability

1-Decanaminium, N-decyl-N, N-dimethyl-, chloride (1:1) (7173-51-5)

Persistence and degradability	Readily biodegradable in water.
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12.3. Bioaccumulative potential

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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Glutaraldehyde (111-30-8)

Partition coefficient n-octanol/water (Log Pow)	-0.36 Source: ECHA
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1-Decanaminium, N-decyl-N, N-dimethyl-, chloride (1:1) (7173-51-5)

BCF - Fish [1]	81 (Other, 46 day(s), Lepomis macrochirus, Experimental value)
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Partition coefficient n-octanol/water (Log Pow)	4.66 (Estimated value)
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Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
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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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1-Decanaminium, N-decyl-N, N-dimethyl-, chloride (1:1) (7173-51-5)

Mobility in soil	667 – 24433 Source: ECHA
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Surface tension	25.82 mN/m (20 °C, 1 g/l, EU Method A.5: Surface tension)
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Ecology - soil	No (test)data on mobility of the substance available.
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12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Additional information	: Flammable vapors may accumulate in the container.

SECTION 14: Transport information

DOT	IMDG	IATA
14.1. UN number		
Not regulated	Not applicable	Not applicable
14.2. Proper Shipping Name		
Not regulated	Not applicable	Not applicable

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DOT	IMDG	IATA
14.3. Transport hazard class(es)		
Not regulated	Not applicable	Not applicable
14.4. Packing group		
Not regulated	Not applicable	Not applicable
14.5. Environmental hazards		
Not regulated	Not applicable	Not applicable
No supplementary information available		

14.6. Special precautions for user

DOT

Not regulated

IMDG

Not applicable

IATA

Not applicable

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:

Quaternary ammonium compounds, benzyl-C12-16 alkyldimethyl, chlorides	CAS-No. 68424-85-1	1.4 – 1.6%
Glutaraldehyde	CAS-No. 111-30-8	11.4 – 12.6%
1-Decanaminium, N-decyl-N, N-dimethyl-, chloride (1:1)	CAS-No. 7173-51-5	1.4 – 1.6%

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

National regulations

No additional information available

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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

Revision date : 8/22/2024

Full text of H-phrases	
H302	Harmful if swallowed
H318	Causes serious eye damage
H334	May cause an allergy or asthma symptoms or breathing difficulties if inhaled

Safety Data Sheet (SDS), USA