

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Name of product Certisil Argento Flüssig

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Sector of uses [SU]

SU21 - Consumer uses: Private households (= general public = consumers)

Product categories [PC]

disinfectants

PC8 - Biocidal products (e.g. Disinfectants, pest control)

Recommended intended purpose(s)

Water disinfection

1.3. Details of the supplier of the safety data sheet

Manufacturer/distributor

Katadyn Deutschland GmbH
Hessenring 23, D-64546 Mörfelden-Walldorf
Phone +49 6105 45 67 89

Advice

This number is only available at office times.
Phone +41 44 839 21 11
E-mail (competent person):
info@katadyn.ch

1.4. Emergency telephone number

Emergency advice

Swiss toxicological Information Center
Phone 145 / +41 44 251 51 51

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to 67/548/EEC or 1999/45/EC

N; R51/53

R-phrases

51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Additional hints

The preparation is classified as hazardous according Directive 1999/45/EC.

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]

Hazard classes and Hazard categories	Hazard Statements	Classification procedure
Aquatic Chronic 2	H411	

Hazard statements for environmental hazards

H411 Toxic to aquatic life with long lasting effects.

Additional hints

The classification is according to the latest editions of the EU-lists, and extended by company and literature data. This mixture is classified as hazardous according to Regulation (EC) No 1272/2008 [GHS].

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]



GHS09

Hazard statements for environmental hazards

H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements

General

P102 Keep out of reach of children.

Prevention

P273 Avoid release to the environment.

Response

P391 Collect spillage.

Disposal

P501 Dispose of contents/container in accordance with local legislation.

Hazardous ingredients for labeling

silver-nitrate

2.3. Other hazards

No information available.

SECTION 3: Composition/ information on ingredients

3.1. Substances

not applicable

3.2. Mixtures

Hazardous ingredients

CAS No	EC No	Name	[%]	Classification according to 67/548/EEC
7440-22-4	231-131-3	Silver	< 0,1	--
7631-99-4	231-554-3	sodium nitrate	< 0,1	Xn R22; O R8

Certisil Argento Flüssig

Hazardous ingredients (continued)

CAS No	EC No	Name	[%]	Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]
7440-22-4	231-131-3	Silver	< 0,1	
7631-99-4	231-554-3	sodium nitrate	< 0,1	Ox. Sol. 3, H272 / Acute Tox. 4, H302

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated soaked clothing immediately.

In case of inhalation

Remove the casualty into fresh air and keep him immobile.

In the event of symptoms refer for medical treatment.

In case of skin contact

In case of contact with skin wash off immediately with soap and water.

Consult a doctor if skin irritation persists.

In case of eye contact

In case of contact with eyes rinse with plenty of water carefully. In the event of persistent symptoms seek medical treatment.

In case of ingestion

If swallowed seek medical advice immediately and show the doctor packing or label.

Rinse out mouth thoroughly with water.

Give plenty of water to drink in small sips.

4.2. Most important symptoms and effects, both acute and delayed

No information available.

4.3. Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Product does not burn, fire-extinguishing activities according to surrounding.

Alcohol-resistant foam

Dry powder

Carbon dioxide

Water spray jet

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

In case of fire formation of dangerous gases possible.

5.3. Advice for firefighters

Special protective equipment for fire-fighters

Use breathing apparatus with independent air supply.

Certisil Argento Flüssig

Fire-fighting operations, rescue and clearing work under effect of combustion and smoulder gases just may be done with breathing apparatus.

Additional information

Collect contaminated firefighting water separately, must not be discharged into the drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Avoid contact with skin and eyes.

Use personal protective clothing.

6.2. Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

6.3. Methods and material for containment and cleaning up

Send in suitable containers for recovery or disposal.

Take up with absorbent material (e.g. general-purpose binder).

Additional Information

Informations for safe handling see chapter 7.

Informations for personal protective equipment see chapter 8.

Informations for disposal see chapter 13.

6.4. Reference to other sections

No information available.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid contact with skin and eyes.

Care for thoroughly room ventilation, if necessary use in well ventilated area with local exhaust ventilation at workplace.

General protective measures

Avoid contact with eyes and skin

Take the usual precautions when handling chemicals.

Hygiene measures

At work do not eat, drink and smoke.

Keep away from food and drink.

Wash hands before breaks and after work.

Advice on protection against fire and explosion

The product is not combustible.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep in closed original container.

Advice on storage compatibility

Do not store together with food.

Certisil Argento Flüssig

Further information on storage conditions

Keep container dry, tightly closed and store at cool and aired place.

Storage group 11

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls

Respiratory protection

No special measures necessary if used correctly.

Hand protection

Glove material specification [make/type, thickness, permeation time/life, wetting resistance]: nitrile rubber or butyle rubber; 0,5 mm; ca 480 Min.

Please observe the glove manufacturer's instructions on permeability and ruptur times as well as the specific workplace conditions.

Eye protection

safety goggles

Other protection measures

Light protective clothing.

Appropriate engineering controls

Provide suitable extraction at the processing machines.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

liquid

Colour

colourless

Odour

odourless

Odour threshold

not determined

Important health, safety and environmental information

	Value	Temperature	at	Method	Remark
pH value	5.9				
boiling point	100 °C				
melting point	not applicable				
Flash point	not applicable				
Vapourisation rate	not determined				
Flammable (solid)	not applicable				

Certisil Argento Flüssig

	Value	Temperature	at	Method	Remark
Flammability (gas)	not determined				
Ignition temperature	not applicable				
Self ignition temperature	not applicable				
Lower explosion limit	not determined				
Upper explosion limit	not determined				
Vapour pressure	< 0.03 bar				
Relative density	1,2 g/cm ³	20 °C			
Vapour density	not determined				
Solubility in water					miscible
Solubility/other	not determined				
Partition coefficient n-octanol/water (log P O/W)	not determined				
Decomposition temperature	not determined				
Viscosity dynamic	1.6 cSt				
Solvent concentration	ca. 74 %				

Oxidising properties

No information available.

Explosive properties

The product is not explosiv.

9.2. Other information

No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reactions known.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No information available.

Certisil Argento Flüssig

10.4. Conditions to avoid

No decomposition if used as directed.

10.5. Incompatible materials

Materials to avoid

Reactions with strong acids.

Reactions with strong oxidising agents.

10.6. Hazardous decomposition products

Stable under normal conditions.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity/Irritability/Sensitization

	Value/Validation	Species	Method	Remark
LD50 acute oral	> 2000 mg/kg	rat		
Irritability skin	non-irritant			
Irritability eye	non-irritant			
Skin sensitization	non-sensitizing			

Subacute Toxicity - Carcinogenicity

	Value	Species	Method	Validation
Mutagenicity	No data available.			
Reproduction-Toxicity	No data available.			
Carcinogenicity	No data available.			

Additional information

In the case of appropriate handling and intended use no healthwise unfavorable effects of the product are well-known.

No toxicological data available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicological effects

	Value	Species	Method	Validation
Fish	No data available			
Daphnia	No data available			

Value	Species	Method	Validation
Algae	No data available		
12.2. Persistence and degradability			
Biological degradability	No data available		
12.3. Bioaccumulative potential			
No information available.			
12.4. Mobility in soil			
No information available.			
12.5. Results of PBT and vPvB assessment			
No information available.			
12.6. Other adverse effects			
General regulation			
Do not discharge into the drains/surface waters/groundwater.			
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.			
Ecological dates are not available.			
Do not allow uncontrolled leakage of product into the environment.			

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste code No.

16 05 07*

Name of waste

discarded inorganic chemicals consisting of or containing dangerous substances

Wastes marked with an asterisk are considered to be hazardous waste pursuant to Directive 2008/98/EC on hazardous waste.

Recommendations for the product

In accordance with regulations for special waste, must be taken to a special waste disposal.
 Undiluted product rests: take to local special waste collecting point.

Recommendations for packaging

Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

Packaging that cannot be cleaned should be disposed of like the product.

General information

Partially emptied packaging must be taken to point of sale or to a special waste disposal. Dispose of empty containers as urban waste.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA-DGR
14.1. UN number	3082	3082	3082

Certisil Argento Flüssig

	ADR/RID	IMDG	IATA-DGR
14.2. UN proper shipping name	Environmentally Hazardous Substance, Liquide, n.o.s. (sodium nitrate)	Environmentally Hazardous Substance, Liquide, n.o.s. (sodium nitrate)	Environmentally Hazardous Substance, Liquide, n.o.s. (sodium nitrate)
14.3. Transport hazard class(es)	9	9	9
14.4. Packing group	III	III	III
14.5. Environmental hazards	Yes	Yes	Yes

14.6. Special precautions for user

No information available.

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

No information available.

Land and inland navigation transport ADR/RID

Hazard label(s) 9

tunnel restriction code E

The product is not subject of the regulations ADR / RID in packaging < 5 L / < 5 kg in accordance with Special Provision 375.

Marine transport IMDG

MARINE POLLUTANT

The product is not subject of the regulations IMDG in packaging < 5 L / < 5 kg in accordance with section 2.10.2.7 IMDG.

Air transport ICAO/IATA-DGR

The product is not subject of the IATA regulations in packaging < 5 L / < 5 kg in accordance with Special Provision A197.

Transport/further information

Additional marking for environmentally hazardous (fish and tree) required.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

Water hazard class 2 hazardous to waters, self-classification

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Recommended uses and restrictions

National and local regulations concerning chemicals shall be observed.

Further information

The information contained herein is based on the state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

Wording of the R/H-phrases specified in chapter 3 (not the classification of the mixture!)

R 22 Harmful if swallowed.

R 8 Contact with combustible material may cause fire.

H272 May intensify fire; oxidiser.

H302 Harmful if swallowed.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Name of product Certisil Argento Flüssig

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Sector of uses [SU]

SU21 - Consumer uses: Private households (= general public = consumers)

Product categories [PC]

disinfectants

PC8 - Biocidal products (e.g. Disinfectants, pest control)

Recommended intended purpose(s)

Water disinfection

1.3. Details of the supplier of the safety data sheet

Manufacturer/distributor

Katadyn Deutschland GmbH
Hessenring 23, D-64546 Mörfelden-Walldorf
Phone +49 6105 45 67 89

Advice

This number is only available at office times.
Phone +41 44 839 21 11
E-mail (competent person):
info@katadyn.ch

1.4. Emergency telephone number

Emergency advice

Swiss toxicological Information Center
Phone 145 / +41 44 251 51 51

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to 67/548/EEC or 1999/45/EC

N; R51/53

R-phrases

51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Additional hints

The preparation is classified as hazardous according Directive 1999/45/EC.

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]

Hazard classes and Hazard categories	Hazard Statements	Classification procedure
Aquatic Chronic 2	H411	

Hazard statements for environmental hazards

H411 Toxic to aquatic life with long lasting effects.

Additional hints

The classification is according to the latest editions of the EU-lists, and extended by company and literature data. This mixture is classified as hazardous according to Regulation (EC) No 1272/2008 [GHS].

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]



GHS09

Hazard statements for environmental hazards

H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements

General

P102 Keep out of reach of children.

Prevention

P273 Avoid release to the environment.

Response

P391 Collect spillage.

Disposal

P501 Dispose of contents/container in accordance with local legislation.

Hazardous ingredients for labeling

silver-nitrate

2.3. Other hazards

No information available.

SECTION 3: Composition/ information on ingredients

3.1. Substances

not applicable

3.2. Mixtures

Hazardous ingredients

CAS No	EC No	Name	[%]	Classification according to 67/548/EEC
7440-22-4	231-131-3	Silver	< 0,1	--
7631-99-4	231-554-3	sodium nitrate	< 0,1	Xn R22; O R8

Certisil Argento Flüssig

Hazardous ingredients (continued)

CAS No	EC No	Name	[%]	Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]
7440-22-4	231-131-3	Silver	< 0,1	
7631-99-4	231-554-3	sodium nitrate	< 0,1	Ox. Sol. 3, H272 / Acute Tox. 4, H302

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated soaked clothing immediately.

In case of inhalation

Remove the casualty into fresh air and keep him immobile.

In the event of symptoms refer for medical treatment.

In case of skin contact

In case of contact with skin wash off immediately with soap and water.

Consult a doctor if skin irritation persists.

In case of eye contact

In case of contact with eyes rinse with plenty of water carefully. In the event of persistent symptoms seek medical treatment.

In case of ingestion

If swallowed seek medical advice immediately and show the doctor packing or label.

Rinse out mouth thoroughly with water.

Give plenty of water to drink in small sips.

4.2. Most important symptoms and effects, both acute and delayed

No information available.

4.3. Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Product does not burn, fire-extinguishing activities according to surrounding.

Alcohol-resistant foam

Dry powder

Carbon dioxide

Water spray jet

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

In case of fire formation of dangerous gases possible.

5.3. Advice for firefighters

Special protective equipment for fire-fighters

Use breathing apparatus with independent air supply.

Certisil Argento Flüssig

Fire-fighting operations, rescue and clearing work under effect of combustion and smoulder gases just may be done with breathing apparatus.

Additional information

Collect contaminated firefighting water separately, must not be discharged into the drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Avoid contact with skin and eyes.

Use personal protective clothing.

6.2. Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

6.3. Methods and material for containment and cleaning up

Send in suitable containers for recovery or disposal.

Take up with absorbent material (e.g. general-purpose binder).

Additional Information

Informations for safe handling see chapter 7.

Informations for personal protective equipment see chapter 8.

Informations for disposal see chapter 13.

6.4. Reference to other sections

No information available.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid contact with skin and eyes.

Care for thoroughly room ventilation, if necessary use in well ventilated area with local exhaust ventilation at workplace.

General protective measures

Avoid contact with eyes and skin

Take the usual precautions when handling chemicals.

Hygiene measures

At work do not eat, drink and smoke.

Keep away from food and drink.

Wash hands before breaks and after work.

Advice on protection against fire and explosion

The product is not combustible.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep in closed original container.

Advice on storage compatibility

Do not store together with food.

Certisil Argento Flüssig

Further information on storage conditions

Keep container dry, tightly closed and store at cool and aired place.

Storage group 11

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls

Respiratory protection

No special measures necessary if used correctly.

Hand protection

Glove material specification [make/type, thickness, permeation time/life, wetting resistance]: nitrile rubber or butyle rubber; 0,5 mm; ca 480 Min.

Please observe the glove manufacturer's instructions on permeability and ruptur times as well as the specific workplace conditions.

Eye protection

safety goggles

Other protection measures

Light protective clothing.

Appropriate engineering controls

Provide suitable extraction at the processing machines.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

liquid

Colour

colourless

Odour

odourless

Odour threshold

not determined

Important health, safety and environmental information

	Value	Temperature	at	Method	Remark
pH value	5.9				
boiling point	100 °C				
melting point	not applicable				
Flash point	not applicable				
Vapourisation rate	not determined				
Flammable (solid)	not applicable				

Certisil Argento Flüssig

	Value	Temperature	at	Method	Remark
Flammability (gas)	not determined				
Ignition temperature	not applicable				
Self ignition temperature	not applicable				
Lower explosion limit	not determined				
Upper explosion limit	not determined				
Vapour pressure	< 0.03 bar				
Relative density	1,2 g/cm ³	20 °C			
Vapour density	not determined				
Solubility in water					miscible
Solubility/other	not determined				
Partition coefficient n-octanol/water (log P O/W)	not determined				
Decomposition temperature	not determined				
Viscosity dynamic	1.6 cSt				
Solvent concentration	ca. 74 %				

Oxidising properties

No information available.

Explosive properties

The product is not explosiv.

9.2. Other information

No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reactions known.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No information available.

Certisil Argento Flüssig

10.4. Conditions to avoid

No decomposition if used as directed.

10.5. Incompatible materials

Materials to avoid

Reactions with strong acids.

Reactions with strong oxidising agents.

10.6. Hazardous decomposition products

Stable under normal conditions.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity/Irritability/Sensitization

	Value/Validation	Species	Method	Remark
LD50 acute oral	> 2000 mg/kg	rat		
Irritability skin	non-irritant			
Irritability eye	non-irritant			
Skin sensitization	non-sensitizing			

Subacute Toxicity - Carcinogenicity

	Value	Species	Method	Validation
Mutagenicity	No data available.			
Reproduction-Toxicity	No data available.			
Carcinogenicity	No data available.			

Additional information

In the case of appropriate handling and intended use no healthwise unfavorable effects of the product are well-known.

No toxicological data available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicological effects

	Value	Species	Method	Validation
Fish	No data available			
Daphnia	No data available			

Value	Species	Method	Validation
Algae	No data available		
12.2. Persistence and degradability			
Biological degradability	No data available		
12.3. Bioaccumulative potential			
No information available.			
12.4. Mobility in soil			
No information available.			
12.5. Results of PBT and vPvB assessment			
No information available.			
12.6. Other adverse effects			
General regulation			
Do not discharge into the drains/surface waters/groundwater.			
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.			
Ecological dates are not available.			
Do not allow uncontrolled leakage of product into the environment.			

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste code No.

16 05 07*

Name of waste

discarded inorganic chemicals consisting of or containing dangerous substances

Wastes marked with an asterisk are considered to be hazardous waste pursuant to Directive 2008/98/EC on hazardous waste.

Recommendations for the product

In accordance with regulations for special waste, must be taken to a special waste disposal.
 Undiluted product rests: take to local special waste collecting point.

Recommendations for packaging

Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

Packaging that cannot be cleaned should be disposed of like the product.

General information

Partially emptied packaging must be taken to point of sale or to a special waste disposal. Dispose of empty containers as urban waste.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA-DGR
14.1. UN number	3082	3082	3082

Certisil Argento Flüssig

	ADR/RID	IMDG	IATA-DGR
14.2. UN proper shipping name	Environmentally Hazardous Substance, Liquide, n.o.s. (sodium nitrate)	Environmentally Hazardous Substance, Liquide, n.o.s. (sodium nitrate)	Environmentally Hazardous Substance, Liquide, n.o.s. (sodium nitrate)
14.3. Transport hazard class(es)	9	9	9
14.4. Packing group	III	III	III
14.5. Environmental hazards	Yes	Yes	Yes

14.6. Special precautions for user

No information available.

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

No information available.

Land and inland navigation transport ADR/RID

Hazard label(s) 9

tunnel restriction code E

The product is not subject of the regulations ADR / RID in packaging < 5 L / < 5 kg in accordance with Special Provision 375.

Marine transport IMDG

MARINE POLLUTANT

The product is not subject of the regulations IMDG in packaging < 5 L / < 5 kg in accordance with section 2.10.2.7 IMDG.

Air transport ICAO/IATA-DGR

The product is not subject of the IATA regulations in packaging < 5 L / < 5 kg in accordance with Special Provision A197.

Transport/further information

Additional marking for environmentally hazardous (fish and tree) required.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

Water hazard class 2 hazardous to waters, self-classification

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Recommended uses and restrictions

National and local regulations concerning chemicals shall be observed.

Further information

The information contained herein is based on the state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

Wording of the R/H-phrases specified in chapter 3 (not the classification of the mixture!)

R 22 Harmful if swallowed.

R 8 Contact with combustible material may cause fire.

H272 May intensify fire; oxidiser.

H302 Harmful if swallowed.