

Information about Compilation of Safety Data Sheets

Product: Silver Enhancer Kit for Membranes
Company: SeraCare Life Sciences
Article number: 5450-0012

All components of the aforementioned kit had been classified according to Regulation (EC) No. 1907/2006 (REACH) and to Regulation (EC) No. 1272/2008 (GHS/CLP).

For both kit components Silver Enhancer Solution A (article number 50-22-05) and Silver Enhancer Solution B (article number 50-22-06), Safety Data Sheets had been compiled (enclosure).

When handling the kit components, the general and specific safety precautions for laboratories and the corresponding directives have to be followed.

Date of issue: May 2018

medac

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**Safety data sheet
according to 1907/2006/EC, Article 31**

Printing date 30.05.2017

Version number 2

Revision: 22.05.2017

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier****Trade name:** Silver Enhancer Solution A (microscopy, membranes)**Article number:** 50-22-03, 50-22-05**Registration number**

This product is a mixture (see chapter 3). Registration number(s) is/are not available for this substance/these substances as the substance(s) or its/their use are exempted from registration according to Article 2 REACH Regulation (EC) No. 1907/2006, the annual tonnage does not require registration or the registration is envisaged for a later registration deadline.

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

Relevant identified uses:

RUO (Research Use Only).

Uses advised against:

For in vitro diagnosis.

Sector of Use SU24 Scientific research and development**Product category** PC21 Laboratory chemicals**Process category** PROC15 Use as laboratory reagent**Application of the substance / the mixture** Immunochemical reagent for detection / auxiliary reagent**1.3 Details of the supplier of the safety data sheet****Manufacturer/Distributor:**

Manufacturer:

SeraCare Life Sciences (KPL)

910 Clopper Road

Gaithersburgh, Maryland 20878, USA

Distributor:

medac GmbH

Theaterstrasse 6

22880 Wedel, Germany

phone: +49 4103 8006-0

Informing department:

Product Safety

productsafety@medac.de

1.4 Emergency telephone number:

Giftinformationszentrum-Nord, Phone: ++49 551 19 240 (service in German and English, 24 hours permanently accessible).

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

The product is classified according to CLP regulation.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Dam. 1 H318 Causes serious eye damage.

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

2.2 Label elements**Labelling according to Regulation (EC) No 1272/2008****Hazard pictograms**

GHS05 GHS09

Signal word Danger**Hazard-determining components of labelling:**

Silver nitrate

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Hazard statements

H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P280 Wear protective gloves / protective clothing / eye protection
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P307+P311 IF exposed: Call a POISON CENTER or doctor/physician.

Labelling of packages where the contents do not exceed 125 ml
Hazard pictograms


GHS05 GHS09

Signal word Danger

Hazard-determining components of labelling:

Silver nitrate

Hazard statements

H318 Causes serious eye damage.

Precautionary statements

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P307+P311 IF exposed: Call a POISON CENTER or doctor/physician.

2.3 Other hazards
Results of PBT and vPvB assessment
PBT: Substance(s) does/do not meet the criteria for PBT according to Regulation (EC) No 1907/2006, Annex XIII.





vPvB: Substance(s) does/do not meet the criteria for vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

SECTION 3: Composition/information on ingredients

3.1. Chemical characterisation: substances Not applicable. Product is a mixture.

3.2 Chemical characterisation: Mixtures
Description: Immunochemical reagent / auxiliary reagent

Dangerous components:

CAS: 7761-88-8 EINECS: 231-853-9 Index number: 047-001-00-2	Silver nitrate	 Ox. Sol. 2, H272  Skin Corr. 1B, H314  Aquatic Acute 1, H400; Aquatic Chronic 1, H410  Acute Tox. 4, H302	3-<5%
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SVHC Not applicable.

Additional information For the wording of the listed H-phrases please refer to Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures
General information First aider: Take care of self-protection.

After inhalation Supply fresh air and call for doctor for safety reasons.

After skin contact

Remove contaminated clothes.
 Rinse well with water immediately.
 In case of symptoms call a physician.

After eye contact

Rinse eyes cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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Instantly consult ophthalmologist.

After swallowing

Wash out mouth with copious amounts of water.

Let drink water (2 glasses maximum).

Seek immediate medical advice.

4.2 Most important symptoms and effects, both acute and delayed

Irritations of the respiratory tracts and the gastrointestinal tract.

Risk of serious eye damage.

Information for doctor

Show Safety Data Sheet.

Point to silver nitrate.

Danger No further relevant information available.**4.3 Indication of any immediate medical attention and special treatment needed**

Treatment according to symptoms.

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing agents** Product itself does not burn. Use fire fighting measures that suit the environment.**For safety reasons unsuitable extinguishing agents** For this mixture no limitations of extinguishing agents are given.**5.2 Special hazards arising from the substance or mixture**

Can be released in case of fire:

Carbon monoxide (CO)

Carbon dioxide (CO₂)Nitrogen oxides (NO_x)**5.3 Advice for firefighters****Protective equipment:**

Stay in the danger area only with self-contained breathing apparatus.

Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Additional information

Precipitate gases/fumes/mists with water spray jet.

Collect contaminated fire fighting water separately. It must not enter drains.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel:

Avoid reagent contact with eyes and skin.

Provide fresh air in closed rooms.

Advice for emergency responders: Protective equipment: see Section 8.

6.2 Environmental precautions: Do not empty into drains.**6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Afterwards clean with water and cleansing agent.

Collect the material and dispose of properly.

Ensure adequate ventilation.

6.4 Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

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SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Observe label precautions.

Open and handle container with care.

Information about protection against explosions and fires: The product is not flammable**7.2 Conditions for safe storage, including any incompatibilities** No further relevant information available.**Storage****Requirements to be met by storerooms and containers:** Store at +2 °C to +8 °C.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** Store in the dark.**Storage class**

Storage class 12 according to the German "Technical Rules for Hazardous Substances (TRGS) 510": Noncombustible liquids.

7.3 Specific end use(s) Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.**SECTION 8: Exposure controls/personal protection****Additional information about design of technical systems:** No further data; see Section 7.**8.1 Control parameters****Components with critical values that require monitoring at the workplace:****DNELs** No further relevant information available.**PNECs** No further relevant information available.

CAS No.	Designation of material	%	Type	Value	Unit
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Additional Occupational Exposure Limit Values for possible hazards during processing: Not applicable.**Additional information:** The official lists that were valid during the compilation were used as basis.**8.2 Exposure controls**

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See Section 7.

Personal protective equipment**General protective and hygienic measures**

The usual precautionary measures should be adhered to in handling the chemicals.

Avoid contact with the eyes and skin.

Remove contaminated clothing immediately.

Do not eat or drink while working.

Keep away from food and beverages.

Wash hands during breaks and at the end of the work.

Breathing equipment:

Essential if vapours/aerosols develop.

Recommended filter type:

Filter A (according to standard EN 3181) for vapours of organic compounds..

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Protection of hands: Protective gloves (AQL 1.5).**Material of gloves**

Nitrile rubber, NBR

Natural rubber, NR

Thickness 0.11 mm.

Product quality must comply with standard EN 374.

Penetration time of glove material Penetration time > 120 min.**For the permanent contact in work areas without heightened risk of injury (e.g. Laboratory) gloves made of the following material are suitable:**

Product has not been designed for permanent contact.

For the permanent contact gloves made of the following materials are suitable:

Product has not been designed for permanent contact.

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For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:

Product has not been designed for permanent contact.

As protection from splashes gloves made of the following materials are suitable:

Nitrile rubber, NBR

Natural rubber, NR

Thickness: 0.11 mm.

Penetration time > 120 min.

Eye protection: Tightly sealed safety glasses (DIN EN 166).

Body protection: Protective work clothing.

Limitation and supervision of exposure into the environment Do not empty into drains.

Risk management measures Void.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form:	liquid
Colour:	Colourless
Smell:	Odourless
Odour threshold:	No information available.

Important information on protection of health and environment, and on safety.

No further relevant information available.

pH-value: ca. 9

Change in condition Not applicable.

Melting point/freezing point: ca. 0 °C

Initial boiling point and boiling range: ca. 100 °C

Flash point:	Not applicable.
Inflammability (solid, gaseous)	Not applicable.
Ignition temperature:	Not available.
Decomposition temperature:	No information available.
Self-inflammability:	Not self-inflammable.
Explosive properties:	Not explosive.
Critical values for explosion:	
Lower:	Not applicable.
Upper:	Not applicable.
Oxidising properties	No information available.
Steam pressure at 20 °C:	23 hPa
Density	No information available.
Relative density	No information available.
Vapour density	No information available.
Evaporation rate	No information available.
Solubility in / Miscibility with	
Water:	Miscible
Partition coefficient: n-octanol/water:	No information available.
Viscosity:	
dynamic:	No information available.
kinematic:	No information available.
Solvent content:	
Organic solvents:	0.0 %
Water:	90.0 %
Solids content:	< 5 %

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9.2 Other information

No further relevant information available.

SECTION 10: Stability and reactivity**10.1 Reactivity** For this mixture no relevant information available.**10.2 Chemical stability** The product is chemically stable under the indicated storage conditions.**Thernak decomposition / conditions to be avoided:** No decomposition if used according to specifications.**10.3 Possibility of hazardous reactions** For these concentrations no relevant information available.**10.4 Conditions to avoid:** Exposure to light.**10.5 Incompatible materials:** Strong oxidizing agents and inorganic nitrates**10.6 Hazardous decomposition products:** In case of burning of larger amounts: See Section 5.**Additional information:** No further relevant information available.**SECTION 11: Toxicological information****11.1 Information on toxicological effects** Data on the toxicity of this mixture are not available.**Acute toxicity** Based on available data, the classification criteria are not met.**LD/LC50 values that are relevant for classification:****7761-88-8 Silver nitrate**

Oral LD50 1173 mg/kg (rat)

Specific symptoms in biological assay: No further relevant information available.**Primary irritant effect:****Skin corrosion/irritation**

Causes skin irritation.

Serious eye damage/irritation

Causes serious eye damage.

after swallowing: Mucosal irritations in mouth, pharynx, oesophagus and stomach-gut tract.**after inhalation:** Irritations.**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.**Other information (about experimental toxicology):** No further relevant information available.**Subacute to chronic toxicity:** No further relevant information available.**Additional toxicological information:** No further relevant information available.**Toxicokinetics, metabolism and distribution** No relevant information available.**Acute effects (acute toxicity, irritation and corrosivity)** Strong irritations with the danger of severe ocular damage.**Sensitisation** No sensitising effect known.**Repeated dose toxicity** The substance or mixture is not classified as specific target organ toxicant, repeated exposure.**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)** No further relevant information available.**Germ cell mutagenicity** Based on available data, the classification criteria are not met.**Carcinogenicity** Based on available data, the classification criteria are not met.**Reproductive toxicity** Based on available data, the classification criteria are not met.**STOT-single exposure** Based on available data, the classification criteria are not met.**STOT-repeated exposure** Based on available data, the classification criteria are not met.**Aspiration hazard** Based on available data, the classification criteria are not met.**SECTION 12: Ecological information****12.1 Toxicity****Aquatic toxicity:** Toxic to aquatic life with long lasting effects.**12.2 Persistence and degradability**

The methods for determining the biological degradability are not applicable to inorganic substances / mixtures of inorganic substances.

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Other information: No further relevant information available.

Behaviour in environmental systems:

Components: No relevant information available.

12.3 Bioaccumulative potential No data available.

12.4 Mobility in soil No data available.

Ecotoxicological effects:

Remark: Toxic to aquatic life with long lasting effects.

Additional ecological information:

General notes:

Water danger class 3 (Self-assessment): extremely hazardous for water.
Do not let enter drains.

12.5 Results of PBT and vPvB assessment

PBT: PBT assessment not available as chemical safety assessment not required/not conducted.

vPvB: vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects No relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product residues have to be disposed of according to the Waste Framework Directive as well as national and regional regulations in each of the latest versions.

Hazardous substances: Silver nitrate

Uncleaned packagings:

Recommendation: Uncleaned packagings have to be disposed of in the same manner as the product residues.

SECTION 14: Transport information

**14.1 UN-Number
ADR, IMDG, IATA**

UN3082

14.2 UN proper shipping name

ADR

-

IMDG

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (SILVER NITRATE), MARINE POLLUTANT

IATA

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (SILVER NITRATE)

14.3 Transport hazard class(es)

ADR



**Class
Label**

9 (M6) Miscellaneous dangerous substances and articles.
9

IMDG, IATA



**Class
Label**

9 Miscellaneous dangerous substances and articles.
9

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14.4 Packing group ADR, IMDG, IATA	III
14.5 Environmental hazards:	
Marine pollutant:	Symbol (fish and tree)
Special marking (ADR):	Symbol (fish and tree)
Special marking (IATA):	Symbol (fish and tree)
14.6 Special precautions for user	Warning: Miscellaneous dangerous substances and articles.
Kemler Number:	90
EMS Number:	F-A,S-F
Segregation groups	Heavy metals and their salts (including their organometallic compounds)
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
Transport/Additional information:	The transport regulations are cited according to international regulations and in the form applicable in Germany (GGVSE). Possible national deviations in other countries are not considered. THESE TRANSPORT REGULATIONS APPLY TO THE WHOLE PACKAGE!
ADR	Excepted quantity: 30 g (E1).
Limited quantities (LQ)	5L
Transport category	3
Tunnel restriction code	E
UN "Model Regulation":	-

SECTION 15: Regulatory information

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

Labelling according to Regulation (EC) No 1272/2008 See Section 2.

Hazard pictograms See Section 2.

Signal word See Section 2.

Hazard-determining components of labelling: See Section 2.

Hazard statements See Section 2.

Precautionary statements See Section 2.

REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

National regulations

Information about limitation of use:

Take note of the directive on the protection of young people at work in the latest version.

Take note of the directive on the safety and health at work for pregnant and breast feeding mothers and workers of childbearing age in the latest version.

Water hazard class: Water danger class 3 (Self-assessment): extremely hazardous for water.

15.2 Chemical safety assessment: A chemical safety assessment has not been carried out.

SECTION 16: Other information

All information and recommendations are believed to be correct as of the date of this Safety Data Sheet but shall not be taken to be all inclusive and shall be used only as a guide. All chemicals and preparations may present unknown hazards and should be used with caution. medac shall not be held liable for any damage resulting from handling or from contact with the above product.

Relevant phrases

H272 May intensify fire; oxidiser.

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H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Department issuing data specification sheet: Product Safety**Contact:** productsafety@medac.de**Replaces version from:** 09.10.2015**Reason for alteration:**

Change of contact address.

General editorial revision.

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Ox. Sol. 2: Oxidizing solids – Category 2

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

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**Safety data sheet
according to 1907/2006/EC, Article 31**

Printing date 08.05.2018

Version number 3

Revision: 08.05.2018

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier****Trade name:** Silver Enhancer Solution B (Microscopy, Membrane)**Article number:** 50-22-04, 50-22-06**Registration number**

This product is a mixture (see chapter 3). Registration number(s) is/are not available for this substance/these substances as the substance(s) or its/their use are exempted from registration according to Article 2 REACH Regulation (EC) No. 1907/2006, the annual tonnage does not require registration or the registration is envisaged for a later registration deadline.

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

Relevant identified uses:

RUO (Research Use Only).

Uses advised against:

For in vitro diagnosis.

Sector of Use SU24 Scientific research and development**Product category** PC21 Laboratory chemicals**Process category** PROC15 Use as laboratory reagent**Application of the substance / the mixture** Immunochemical reagent for detection / auxiliary reagent**1.3 Details of the supplier of the safety data sheet****Manufacturer/Distributor:**

Manufacturer:

SeraCare Life Sciences (KPL)

910 Clopper Road

Gaithersburgh, Maryland 20878, USA

Distributor:

medac GmbH

Theaterstrasse 6

22880 Wedel, Germany

phone: +49 4103 8006-0

Informing department:

Product Safety

productsafety@medac.de

1.4 Emergency telephone number:

GifTinformatiionszentrum-Nord, Phone: +49 551 19 240 (service in German and English, 24 hours permanently accessible).

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008** The product is classified according to CLP regulation.**2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008**

The product is labelled according to Regulation (EC) No. 1272/2008 (GHS/CLP).

Additional information:

Contains 1,4-dihydroxybenzene. May produce an allergic reaction.

Safety data sheet available on request.

Labelling of packages where the contents do not exceed 125 ml Safety Data Sheet available on request.**2.3 Other hazards** Void.**Results of PBT and vPvB assessment****PBT:** Substance(s) does/do not meet the criteria for PBT according to Regulation (EC) No 1907/2006, Annex XIII.**vPvB:** Substance(s) does/do not meet the criteria for vPvB according to Regulation (EC) No 1907/2006, Annex XIII.**SECTION 3: Composition/information on ingredients****3.1. Chemical characterisation: substances** Not applicable. Product is a mixture.

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Trade name: Silver Enhancer Solution B (Microscopy, Membrane)

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3.2 Chemical characterisation: Mixtures

Description: Water based solution

Dangerous components:

CAS: 123-31-9 EINECS: 204-617-8 Index number: 604-005-00-4 RTECS: MX 3500000	1,4-dihydroxybenzene	 Muta. 2, H341; Carc. 2, H351  Eye Dam. 1, H318  Aquatic Acute 1, H400  Acute Tox. 4, H302; Skin Sens. 1, H317	0.6%
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SVHC Not applicable.

Additional information For the wording of the listed H-phrases please refer to Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information First aider: Take care of self-protection.

After inhalation

Supply fresh air.

In case of symptoms call a physician.

After skin contact

Remove contaminated clothes.

Instantly wash with copious amounts of water.

In case of symptoms call a physician.

After eye contact

Rinse eyes cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

In case of onset of symptoms consult ophthalmologist.

After swallowing

Let rinse out mouth and then drink plenty of water.

In case of symptoms call a physician.

4.2 Most important symptoms and effects, both acute and delayed

 Allergic reactions

Information for doctor

Show Safety Data Sheet.

Treatment according to symptoms.

Danger No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents Product itself does not burn. Use fire fighting measures that suit the environment.

For safety reasons unsuitable extinguishing agents For this mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

For these concentrations no further relevant information available.

5.3 Advice for firefighters

Protective equipment:

In case of burning of a larger amount:

Stay in the danger area only with self-contained breathing apparatus.

Prevent skin and eye contact by keeping a safe distance or by wearing suitable protective clothing/safety glasses.

Additional information

Collect contaminated fire fighting water separately. It must not enter drains.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

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Trade name: Silver Enhancer Solution B (Microscopy, Membrane)

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel:

Avoid reagent contact with eyes and skin.

Provide sufficient ventilation.

Advice for emergency responders: Protective equipment: see Section 8.

6.2 Environmental precautions: Do not empty into drains.

6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Afterwards clean with water and cleansing agent.

Dispose of the material collected according to respective national regulations.

Ensure adequate ventilation.

6.4 Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling No special precautions necessary if handled correctly.

Information about protection against explosions and fires:

The product is not flammable

No special measures required.

7.2 Conditions for safe storage, including any incompatibilities No further relevant information available.

Storage

Requirements to be met by storerooms and containers: Store at +2 °C to +8 °C.**Information about storage in one common storage facility:** For this mixture no further information available.**Further information about storage conditions:** The indications are valid for the whole package.**Storage class** See the respective national guidelines.

7.3 Specific end use(s) Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical systems: No further data; see Section 7.

8.1 Control parameters

Components with critical values that require monitoring at the workplace:

Not required according to German regulations.

DNELs No further relevant information available.**PNECs** No further relevant information available.**Additional information:** The official lists that were valid during the compilation were used as basis.

8.2 Exposure controls

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See Section 7.

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures should be adhered to in handling the chemicals.

Avoid contact with the eyes and skin.

Remove contaminated clothing immediately.

Do not eat or drink while working.

Keep away from food and beverages.

Wash hands during breaks and at the end of the work.

Breathing equipment: No special precautions are necessary if handled correctly.

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Protection of hands:

Disposable medical gloves (AQL 1.5).

The breakthrough times stated below base on laboratory test methods which cannot fully simulate working conditions. It is the responsibility of the enduser to choose the appropriate gloves for his application. If working with substances or mixtures harmful in contact with skin, check the gloves beforehand for holes and fissures.

Material of gloves

Nitrile rubber, NBR

Natural rubber, NR

Thickness 0.11 mm.

The product quality has to comply with DIN EN 455.

Penetration time of glove material Penetration time > 120 min.

For the permanent contact in work areas without heightened risk of injury (e.g. Laboratory) gloves made of the following material are suitable:

Product has not been designed for permanent contact.

For the permanent contact gloves made of the following materials are suitable:

Product has not been designed for permanent contact.

For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:

Product has not been designed for permanent contact.

As protection from splashes gloves made of the following materials are suitable:

Nitrile rubber, NBR

Natural rubber, NR

Thickness: 0.11 mm.

Eye protection: Safety glasses (standard EN 166).

Body protection: Protective work clothing.

Limitation and supervision of exposure into the environment Do not empty into drains.

Risk management measures Void.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
General Information
Appearance:

Form:	liquid
Colour:	colourless
Smell:	No information available.
Odour threshold:	No information available.

Important information on protection of health and environment, and on safety.

No further relevant information available.

pH-value: No information available.

Change in condition

Melting point/freezing point:	0 °C
Initial boiling point and boiling range:	100 °C

Flash point:	Not applicable.
Inflammability (solid, gaseous)	Mixture is not inflammable.
Ignition temperature:	Not applicable.
Decomposition temperature:	No information available.
Self-inflammability:	Not self-inflammable.
Explosive properties:	Not explosive.
Critical values for explosion:	
Lower:	Not applicable.
Upper:	Not applicable.
Oxidising properties	No information available.
Steam pressure at 20 °C:	23 hPa
Density	No information available.
Relative density	No information available.
Vapour density	No information available.

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Evaporation rate	No information available.
Solubility in / Miscibility with	
Water:	Miscible
Partition coefficient: n-octanol/water:	No information available.
Viscosity:	
dynamic:	No information available.
kinematic:	No information available.
Solvent content:	
Organic solvents:	0.0 %
Water:	ca. 95 %
Solids content:	0.6 %

9.2 Other information No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity For this mixture no relevant information available.

10.2 Chemical stability The product is chemically stable under the indicated storage conditions.

Thernak decomposition / conditions to be avoided: No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions No dangerous reactions known.

10.4 Conditions to avoid: No further relevant information available.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products: No further relevant information available.

Additional information: No further relevant information available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity Based on available data, the classification criteria are not met.

LD/LC₅₀ values that are relevant for classification: Quantitative data about toxicity of this product are not available.

Specific symptoms in biological assay: No further relevant information available.

Primary irritant effect:

Skin corrosion/irritation Slight irritations possible.

Serious eye damage/irritation Slight irritations possible.

after swallowing: Slight mucosal irritations in mouth, pharynx and oesophagus possible.

after inhalation: Irritations possible.

Respiratory or skin sensitisation Allergic reactions possible.

Other information (about experimental toxicology): No further relevant information available.

Subacute to chronic toxicity: No further relevant information available.

Additional toxicological information: No further relevant information available.

Toxicokinetics, metabolism and distribution No relevant information available.

Acute effects (acute toxicity, irritation and corrosivity) No acute toxicity information available for this product.

Sensitisation May cause allergic reactions.

Repeated dose toxicity The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Based on available data, the classification criteria are not met.

STOT-single exposure Based on available data, the classification criteria are not met.

STOT-repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

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SECTION 12: Ecological information

12.1 Toxicity
Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability No relevant information available.

Other information: No further relevant information available.

Behaviour in environmental systems:
Components: No relevant information available.

12.3 Bioaccumulative potential No relevant information available.

12.4 Mobility in soil No relevant information available.

Ecotoxicological effects:
Remark: No further relevant information available.

Additional ecological information:
General notes:

 Water danger class 3 (Self-assessment): extremely hazardous for water.
Do not let enter drains.

12.5 Results of PBT and vPvB assessment
PBT: PBT assessment not available as chemical safety assessment not required/not conducted.

vPvB: vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects No relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product residues have to be disposed of according to the Waste Framework Directive as well as national and regional regulations in each the latest versions.

Uncleaned packagings:
Recommendation: Uncleaned packagings have to be disposed of in the same manner as the product residues.

SECTION 14: Transport information

14.1 UN-Number

ADR, ADN, IMDG, IATA -

14.2 UN proper shipping name

ADR, ADN, IMDG, IATA -

14.3 Transport hazard class(es)

 ADR, ADN, IMDG, IATA
Class -

14.4 Packing group

ADR, IMDG, IATA -

14.5 Environmental hazards:
Marine pollutant: No

14.6 Special precautions for user

Not applicable.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

Transport/Additional information:

 Not classified as dangerous in the meaning of transport regulations as issued in the latest version.
The transport regulations are cited according to international regulations and in the form applicable in Germany (GGVSE).
Possible national deviations in other countries are not

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considered.

UN "Model Regulation":

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SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Labelling according to Regulation (EC) No 1272/2008 See Section 2.

Directive 2012/18/EU**Named dangerous substances - ANNEX I** Contains none of the listed substances.**National regulations****Information about limitation of use:**

Take note of the directive on the protection of young people at work in the latest version.

Take note of the directive on the safety and health at work for pregnant and breast feeding mothers and workers of childbearing age in the latest version.

Class	Share in %
I	0.6

Water hazard class: Water danger class 3 (Self-assessment): extremely hazardous for water.**Other regulations, limitations and prohibitive regulations** Void.**15.2 Chemical safety assessment:** A chemical safety assessment has not been carried out.

SECTION 16: Other information

All information and recommendations are believed to be correct as of the date of this Safety Data Sheet but shall not be taken to be all inclusive and shall be used only as a guide. All chemicals and preparations may present unknown hazards and should be used with caution. medac shall not be held liable for any damage resulting from handling or from contact with the above product.

Relevant phrases

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H341 Suspected of causing genetic defects.

H351 Suspected of causing cancer.

H400 Very toxic to aquatic life.

Department issuing data specification sheet: Product Safety**Contact:** productsafety@medac.de**Replaces version from:** 08.12.2015**Reason for alteration:**

Change of manufacturer's address and of article number(s).

Change of contact address.

General editorial revision.

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

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PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 4: Acute toxicity – Category 4
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Muta. 2: Germ cell mutagenicity – Category 2
Carc. 2: Carcinogenicity – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

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