

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

1.1. Product identifier

Product form : Mixture
Name : SINGLE ELEMENT STANDARD SOLUTION FOR AAS - SILVER 1000 mg/l (B001)
Product code : B001

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

1.2.1. Relevant identified uses

Main use category : Professional use
Industrial/Professional use spec : Industrial
For professional use only
Function or use category : Laboratory chemicals

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

SPECTRACER UK Ltd.
201 Dyke Road
BN3 1TL Hove
United Kingdom
T +44 (0)207 193 9114 - F +44 (0)203 432 4686
Email: contact@spectracer.co.uk

1.4. Emergency telephone number

Emergency number : 112 (EU)

| Country | Organisation/Company | Address | Emergency number |
|-----------------------|--|---|---|
| IRELAND (REPUBLIC OF) | National Poisons Information Centre Beaumont Hospital | Beaumont Hospital Beaumont Road 9 Dublin | : +353 1 8379964 |
| UNITED KINGDOM | National Poisons Information Service (NHS Direct) | http://www.npis.org | 111 (England & Wales only) or 112 (EU) or 08454 24 24 24 (Scotland) |

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Aquatic Acute 1 H400

Aquatic Chronic 1 H410

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

N; R50/53

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS09

Signal word (CLP) :

Warning

Hazard statements (CLP) :

H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (CLP) :

P273 - Avoid release to the environment

P391 - Collect spillage
P501 - Dispose of contents/container to a hazardous or special waste collection point

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

| Name | Product identifier | % | Classification according to Directive 67/548/EEC |
|----------------|---|---------|--|
| nitric acid | (CAS No) 7697-37-2 (EC no) 231-714-2 (EC index no) 007-004-00-1 | 1 - 5 | O; R8 C; R35 |
| silver nitrate | (CAS No) 7761-88-8 (EC no) 231-853-9 (EC index no) 047-001-00-2 | 0,1 - 1 | O; R8 C; R34 N; R50/53 |

| Name | Product identifier | Specific concentration limits |
|-------------|---|--|
| nitric acid | (CAS No) 7697-37-2 (EC no) 231-714-2 (EC index no) 007-004-00-1 | (5 =< C < 20) C;R34 (C >= 20) C;R35 (C >= 70) O;R8 |

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|----------------|---|---------|---|
| nitric acid | (CAS No) 7697-37-2 (EC no) 231-714-2 (EC index no) 007-004-00-1 | 1 - 5 | Ox. Liq. 3, H272 Skin Corr. 1A, H314 |
| silver nitrate | (CAS No) 7761-88-8 (EC no) 231-853-9 (EC index no) 047-001-00-2 | 0,1 - 1 | Ox. Sol. 2, H272 Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Aquatic Acute 1, H400 (M=1000) Aquatic Chronic 1, H410 |

| Name | Product identifier | Specific concentration limits |
|-------------|---|--|
| nitric acid | (CAS No) 7697-37-2 (EC no) 231-714-2 (EC index no) 007-004-00-1 | (5 =< C < 20) Skin Corr. 1B, H314 (C >= 20) Skin Corr. 1A, H314 (C >= 65) Ox. Liq. 3, H272 |

Full text of R- and H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|---------------------------------------|---|
| First-aid measures general | : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). |
| First-aid measures after inhalation | : Allow victim to breathe fresh air. Allow the victim to rest. |
| First-aid measures after skin contact | : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. |
| First-aid measures after eye contact | : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist. |
| First-aid measures after ingestion | : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. |

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

Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

| | |
|--------------------------------|--|
| Suitable extinguishing media | : Foam. Dry powder. Carbon dioxide. Water spray. Sand. |
| Unsuitable extinguishing media | : Do not use a heavy water stream. |

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if substance enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep container closed when not in use.
- Incompatible products : Strong bases. Strong acids.
- Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| silver nitrate (7761-88-8) | | |
|----------------------------|---|--|
| EU | IOELV TWA (mg/m ³) | 0,01 mg/m ³ |
| Belgium | Limit value (mg/m ³) | 0,01 mg/m ³ |
| France | VME (mg/m ³) | Argent (composés solubles), en Ag, 0.01 mg/m ³ ; France; Time-weighted average exposure limit 8 h; VRI: Valeur réglementaire indicative |
| Netherlands | Grenswaarde TGG 8H (mg/m ³) | Zilver, oplosbare verbindingen (als Ag), 0.01 mg/m ³ ; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value; as Ag |
| United Kingdom | WEL TWA (mg/m ³) | 0,01 mg/m ³ |
| USA - ACGIH | ACGIH TWA (mg/m ³) | 0,01 mg/m ³ |
| nitric acid (7697-37-2) | | |
| EU | IOELV STEL (mg/m ³) | 2,6 mg/m ³ |
| EU | IOELV STEL (ppm) | 1 ppm |
| Austria | Local name | Salpetersäure |
| Austria | MAK Short time value (mg/m ³) | 2,6 mg/m ³ |
| Austria | MAK Short time value (ppm) | 1 ppm |
| Belgium | Local name | Acide nitrique |
| Belgium | Short time value (mg/m ³) | 2,6 mg/m ³ |
| Belgium | Short time value (ppm) | 1 ppm |
| Bulgaria | Local name | Азотна киселина* |

| nitric acid (7697-37-2) | | |
|-------------------------|--|---------------------------------|
| Bulgaria | OEL STEL (mg/m ³) | 2,6 mg/m ³ |
| Croatia | Local name | Dušična kiselina |
| Croatia | KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m ³) | 2,6 mg/m ³ |
| Croatia | KGVI (kratkotrajna granična vrijednost izloženosti) (ppm) | 1 ppm |
| Croatia | Naznake (HR) | EU** O, C |
| Czech Republic | Local name | Kyselina dusi ná |
| Czech Republic | Expoziční limity (PEL) (mg/m ³) | 1 mg/m ³ |
| Czech Republic | Expoziční limity (PEL) (ppm) | 0,39 ppm |
| Czech Republic | Expoziční limity (NPK-P) (mg/m ³) | 2,5 mg/m ³ |
| Czech Republic | Expoziční limity (NPK-P) (ppm) | 1 ppm |
| Denmark | Local name | Salpetersyre (2007) |
| Denmark | Grænseværdie (kortvarig) (mg/m ³) | 2,6 mg/m ³ |
| Denmark | Grænseværdie (kortvarig) (ppm) | 1 ppm |
| Denmark | Anmærkninger (DK) | ES |
| Estonia | Local name | Lämmastikhape |
| Estonia | OEL STEL (mg/m ³) | 2,6 mg/m ³ |
| Estonia | OEL STEL (ppm) | 1 ppm |
| Finland | Local name | Typpihappo |
| Finland | HTP-arvo (8h) (mg/m ³) | 1,3 mg/m ³ |
| Finland | HTP-arvo (8h) (ppm) | 0,5 ppm |
| Finland | HTP-arvo (15 min) | 2,6 mg/m ³ |
| Finland | HTP-arvo (15 min) (ppm) | 1 ppm |
| France | Local name | Acide nitrique |
| France | VLE (mg/m ³) | 2,6 mg/m ³ |
| France | VLE (ppm) | 1 ppm |
| Germany | Local name | Salpetersäure |
| Germany | TRGS 900 Occupational exposure limit value (mg/m ³) | 2,6 mg/m ³ |
| Germany | TRGS 900 Occupational exposure limit value (ppm) | 1 ppm |
| Germany | Remark (TRGS 900) | EU,13,16 |
| Greece | OEL STEL (mg/m ³) | 2,6 mg/m ³ |
| Greece | OEL STEL (ppm) | 1 ppm |
| Hungary | Local name | SALÉTROMSAV |
| Hungary | CK-érték | 2,6 mg/m ³ |
| Hungary | Megjegyzések (HU) | i, m; l. |
| Ireland | Local name | Nitric acid |
| Ireland | OEL (15 min ref) (mg/m ³) | 2,6 mg/m ³ |
| Ireland | OEL (15 min ref) (ppm) | 1 ppm |
| Ireland | Notes (IE) | IOELV |
| Italy | Local name | Acido nitrico |
| Italy | OEL STEL (mg/m ³) | 2,6 mg/m ³ |
| Italy | OEL STEL (ppm) | 1 ppm |
| Lithuania | Local name | Nitrato rūgštis (azoto rūgštis) |
| Lithuania | TPRV (mg/m ³) | 2,6 mg/m ³ |
| Lithuania | TPRV (ppm) | 1 ppm |
| Luxembourg | Local name | Acide nitrique |



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Safety Data Sheet

according to Regulation (EC) No. 453/2010

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| nitric acid (7697-37-2) | | |
|-------------------------|--|---|
| Luxembourg | OEL STEL (mg/m ³) | 2,6 mg/m ³ |
| Luxembourg | OEL STEL (ppm) | 1 ppm |
| Malta | Local name | Nitric acid |
| Malta | OEL STEL (mg/m ³) | 2,6 mg/m ³ |
| Malta | OEL STEL (ppm) | 1 ppm |
| Netherlands | Local name | Salpeterzuur |
| Netherlands | Grenswaarde TGG 15MIN (mg/m ³) | 1,3 mg/m ³ |
| Netherlands | Grenswaarde TGG 15MIN (ppm) | Salpeterzuur,0.5 ppm; Netherlands; Short time value; Public occupational exposure limit value |
| Poland | Local name | Kwas azotowy(V) |
| Poland | NDS (mg/m ³) | 1,4 mg/m ³ |
| Poland | NDSch (mg/m ³) | 2,6 mg/m ³ |
| Portugal | Local name | Ácido nítrico |
| Portugal | OEL TWA (ppm) | 2 ppm |
| Portugal | OEL STEL (ppm) | 4 ppm |
| Romania | Local name | Acid nitric |
| Romania | OEL STEL (mg/m ³) | 2,6 mg/m ³ |
| Romania | OEL STEL (ppm) | 1 ppm |
| Slovenia | Local name | dušikova kislina |
| Slovenia | OEL TWA (mg/m ³) | 2,6 mg/m ³ |
| Slovenia | OEL TWA (ppm) | 1 ppm |
| Slovenia | OEL STEL (mg/m ³) | 2,6 mg/m ³ |
| Slovenia | OEL STEL (ppm) | 1 ppm |
| Sweden | Local name | Nitric acid |
| Sweden | kortidsvärde (KTV) (mg/m ³) | 13 mg/m ³ |
| Sweden | kortidsvärde (KTV) (ppm) | 5 ppm |
| United Kingdom | Local name | Nitric acid |
| United Kingdom | WEL STEL (mg/m ³) | 2,6 mg/m ³ |
| United Kingdom | WEL STEL (ppm) | 1 ppm |
| Iceland | Local name | Saltpéturssýra |
| Iceland | OEL (15 min ref) (mg/m ³) | 2,6 mg/m ³ |
| Iceland | OEL (15 min ref) (ppm) | 1 ppm |
| Norway | Local name | Salpetersyre |
| Norway | Gjennomsnittsverdier (AN) (mg/m ³) | 5 mg/m ³ |
| Norway | Gjennomsnittsverdier (AN) (ppm) | 2 ppm |
| Switzerland | Local name | Acide nitrique |
| Switzerland | VME (mg/m ³) | 5 mg/m ³ |
| Switzerland | VME (ppm) | 2 ppm |
| Switzerland | VLE (mg/m ³) | 5 mg/m ³ |
| Switzerland | VLE (ppm) | 2 ppm |
| Switzerland | Remark (CH) | 15 min |
| Australia | Local name | Nitric acid |
| Australia | TWA (mg/m ³) | 5,2 mg/m ³ |
| Australia | TWA (ppm) | 2 ppm |
| Australia | STEL (mg/m ³) | 10 mg/m ³ |
| Australia | STEL (ppm) | 4 ppm |
| USA - ACGIH | Local name | Nitric acid |
| USA - ACGIH | ACGIH TWA (ppm) | 2 ppm |
| USA - ACGIH | ACGIH STEL (ppm) | 4 ppm |
| USA - ACGIH | Remark (ACGIH) | URT & eye irr; dental erosion |
| USA - OSHA | Local name | Nitric acid |

| nitric acid (7697-37-2) | | |
|-------------------------|-------------------------------------|---------------------|
| USA - OSHA | OSHA PEL (TWA) (mg/m ³) | 5 mg/m ³ |
| USA - OSHA | OSHA PEL (TWA) (ppm) | 2 ppm |

8.2. Exposure controls

| | |
|----------------------------------|---|
| Appropriate engineering controls | : Provide adequate general and local exhaust ventilation. |
| Personal protective equipment | : Protective goggles. Gloves. |
| Hand protection | : Wear protective gloves |
| Eye protection | : Chemical goggles or safety glasses |
| Respiratory protection | : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended |



Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|---------------------|
| Physical state | : Liquid |
| Colour | : Colourless. |
| Odour | : characteristic. |
| Odour threshold | : No data available |
| pH | : No data available |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : No data available |
| Freezing point | : No data available |
| Boiling point | : No data available |
| Flash point | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : Non flammable |
| Vapour pressure | : No data available |
| Relative vapour density at 20 °C | : No data available |
| Relative density | : No data available |
| Solubility | : No data available |
| Log Pow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : No data available |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

| silver nitrate (7761-88-8) | |
|---|--|
| LD50 oral rat | 1173 mg/kg (Rat) |
| Skin corrosion/irritation | : Not classified Based on available data, the classification criteria are not met |
| Serious eye damage/irritation | : Not classified Based on available data, the classification criteria are not met |
| Respiratory or skin sensitisation | : Not classified Based on available data, the classification criteria are not met |
| Germ cell mutagenicity | : Not classified Based on available data, the classification criteria are not met |
| Carcinogenicity | : Not classified Based on available data, the classification criteria are not met |
| Reproductive toxicity | : Not classified Based on available data, the classification criteria are not met |
| Specific target organ toxicity (single exposure) | : Not classified Based on available data, the classification criteria are not met |
| Specific target organ toxicity (repeated exposure) | : Not classified Based on available data, the classification criteria are not met |
| Aspiration hazard | : Not classified Based on available data, the classification criteria are not met |
| Potential adverse human health effects and symptoms | : Based on available data, the classification criteria are not met. |

SECTION 12: Ecological information

12.1. Toxicity

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

| silver nitrate (7761-88-8) | |
|----------------------------|--|
| LC50 fish 1 | 0,0039 mg/l (96 h; Pimephales promelas) |
| EC50 Daphnia 1 | 0,0006 mg/l (48 h; Daphnia magna; Locomotor effect) |
| LC50 fish 2 | 0,006 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss) |
| EC50 Daphnia 2 | 0,006 mg/l (48 h; Crangon sp.) |
| Threshold limit algae 1 | 0,0007 mg/l (Microcystis aeruginosa; Toxicity test) |
| Threshold limit algae 2 | 0,0095 mg/l (Scenedesmus quadricauda; Toxicity test) |
| nitric acid (7697-37-2) | |
| LC50 fish 1 | 25 - 36 mg/l (96 h; Lepomis macrochirus) |
| EC50 Daphnia 1 | 180 mg/l (48 h; Daphnia magna) |
| LC50 fish 2 | 72 ppm (Gambusia affinis) |
| Threshold limit algae 1 | > 19 mg/l (Algae) |

12.2. Persistence and degradability

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| | |
|-------------------------------|---|
| Persistence and degradability | May cause long-term adverse effects in the environment. |
|-------------------------------|---|

silver nitrate (7761-88-8)

| | |
|-------------------------------|-----------------------------------|
| Persistence and degradability | Biodegradability: Not applicable. |
|-------------------------------|-----------------------------------|

| | |
|---------------------------------|----------------|
| Biochemical oxygen demand (BOD) | Not applicable |
|---------------------------------|----------------|

| | |
|------------------------------|----------------|
| Chemical oxygen demand (COD) | Not applicable |
|------------------------------|----------------|

| | |
|------|----------------|
| ThOD | Not applicable |
|------|----------------|

| | |
|-----------------|----------------|
| BOD (% of ThOD) | Not applicable |
|-----------------|----------------|

nitric acid (7697-37-2)

| | |
|-------------------------------|-----------------------------------|
| Persistence and degradability | Biodegradability: Not applicable. |
|-------------------------------|-----------------------------------|

| | |
|---------------------------------|----------------|
| Biochemical oxygen demand (BOD) | Not applicable |
|---------------------------------|----------------|

| | |
|------------------------------|----------------|
| Chemical oxygen demand (COD) | Not applicable |
|------------------------------|----------------|

| | |
|------|----------------|
| ThOD | Not applicable |
|------|----------------|

| | |
|-----------------|----------------|
| BOD (% of ThOD) | Not applicable |
|-----------------|----------------|

12.3. Bioaccumulative potential

SINGLE ELEMENT STANDARD SOLUTION FOR AAS - SILVER 1000 mg/l (B001)

| | |
|---------------------------|------------------|
| Bioaccumulative potential | Not established. |
|---------------------------|------------------|

silver nitrate (7761-88-8)

| | |
|------------|--|
| BCF fish 1 | 11 - 19 (Micropterus salmoides; Chronic) |
|------------|--|

| | |
|------------|---|
| BCF fish 2 | 15 - 150 (Lepomis macrochirus; Chronic) |
|------------|---|

| | |
|---------|------------------------|
| Log Pow | 0,19 (Estimated value) |
|---------|------------------------|

| | |
|---------------------------|--|
| Bioaccumulative potential | Low bioaccumulation potential (BCF < 500). |
|---------------------------|--|

nitric acid (7697-37-2)

| | |
|------------|---------------|
| BCF fish 1 | <= 1 (Pisces) |
|------------|---------------|

| | |
|---------|--|
| Log Pow | -2,3 (OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method) |
|---------|--|

| | |
|---------------------------|----------------------------------|
| Bioaccumulative potential | Bioaccumulation: Not applicable. |
|---------------------------|----------------------------------|

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Additional information : Avoid release to the environment

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

European List of Waste (LoW) code : 16 05 06* - laboratory chemicals consisting of or containing dangerous substances including mixtures of laboratory chemicals

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : 3082

UN-No. (IMDG) : 3082

UN-No.(IATA) : 3082

UN-No.(ADN) : 3082

UN-No. (RID) : 3082

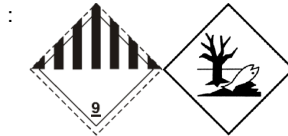
14.2. UN proper shipping name

| | |
|---------------------------------------|---|
| Proper Shipping Name (ADR) | : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. |
| Proper Shipping Name (IMDG) | : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. |
| Proper Shipping Name (IATA) | : Environmentally hazardous substance, liquid, n.o.s. |
| Proper Shipping Name (ADN) | : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. |
| Proper Shipping Name (RID) | : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. |
| Transport document description (ADR) | : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS ; silver nitrate(7761-88-8)), 9, III, (E) |
| Transport document description (IMDG) | : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS |

14.3. Transport hazard class(es)

ADR

| | |
|----------------------------------|-----|
| Transport hazard class(es) (ADR) | : 9 |
| Danger labels (ADR) | : 9 |



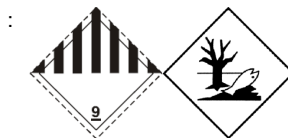
IMDG

| | |
|-----------------------------------|-----|
| Transport hazard class(es) (IMDG) | : 9 |
| Danger labels (IMDG) | : 9 |



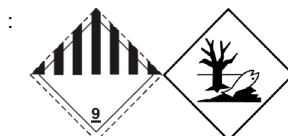
IATA

| | |
|-----------------------------------|-----|
| Transport hazard class(es) (IATA) | : 9 |
| Hazard labels (IATA) | : 9 |



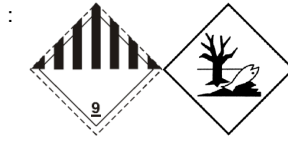
ADN

| | |
|----------------------------------|-----|
| Transport hazard class(es) (ADN) | : 9 |
| Danger labels (ADN) | : 9 |



RID

| | |
|----------------------------------|-----|
| Transport hazard class(es) (RID) | : 9 |
| Danger labels (RID) | : 9 |



14.4. Packing group


| | |
|----------------------|-------|
| Packing group (ADR) | : III |
| Packing group (IMDG) | : III |
| Packing group (IATA) | : III |
| Packing group (ADN) | : III |
| Packing group (RID) | : III |

14.5. Environmental hazards

| | |
|-------------------------------|--|
| Dangerous for the environment | : Yes |
| Marine pollutant | : Yes |
| Other information | : No supplementary information available |

14.6. Special precautions for user

14.6.1. Overland transport

| | |
|---|---|
| Classification code (ADR) | : M6 |
| Special provisions (ADR) | : 274, 335, 601 |
| Limited quantities (ADR) | : 5I |
| Excepted quantities (ADR) | : E1 |
| Packing instructions (ADR) | : P001, IBC03, LP01, R001 |
| Special packing provisions (ADR) | : PP1 |
| Mixed packing provisions (ADR) | : MP19 |
| Portable tank and bulk container instructions (ADR) | : T4 |
| Portable tank and bulk container special provisions (ADR) | : TP1, TP29 |
| Tank code (ADR) | : LGBV |
| Vehicle for tank carriage | : AT |
| Transport category (ADR) | : 3 |
| Special provisions for carriage - Packages (ADR) | : V12 |
| Special provisions for carriage - Loading, unloading and handling (ADR) | : CV13 |
| Hazard identification number (Kemler No.) | : 90 |
| Orange plates | :  |
| Tunnel restriction code (ADR) | : E |
| EAC code | : •3Z |

14.6.2. Transport by sea

| | |
|-----------------------------------|--------------|
| Special provisions (IMDG) | : 274, 335 |
| Limited quantities (IMDG) | : 5 L |
| Excepted quantities (IMDG) | : E1 |
| Packing instructions (IMDG) | : P001, LP01 |
| Special packing provisions (IMDG) | : PP1 |
| IBC packing instructions (IMDG) | : IBC03 |
| Tank instructions (IMDG) | : T4 |
| Tank special provisions (IMDG) | : TP2, TP29 |
| EmS-No. (Fire) | : F-A |
| EmS-No. (Spillage) | : S-F |
| Stowage category (IMDG) | : A |

14.6.3. Air transport

| | |
|--|-------------|
| PCA Excepted quantities (IATA) | : E1 |
| PCA Limited quantities (IATA) | : Y964 |
| PCA limited quantity max net quantity (IATA) | : 30kgG |
| PCA packing instructions (IATA) | : 964 |
| PCA max net quantity (IATA) | : 450L |
| CAO packing instructions (IATA) | : 964 |
| CAO max net quantity (IATA) | : 450L |
| Special provisions (IATA) | : A97, A158 |
| ERG code (IATA) | : 9L |

14.6.4. Inland waterway transport

| | |
|-----------------------------------|----------------|
| Classification code (ADN) | : M6 |
| Special provisions (ADN) | : 274, 335, 61 |
| Limited quantities (ADN) | : 5 L |
| Excepted quantities (ADN) | : E1 |
| Carriage permitted (ADN) | : T |
| Equipment required (ADN) | : PP |
| Number of blue cones/lights (ADN) | : 0 |
| Carriage prohibited (ADN) | : No |
| Not subject to ADN | : No |

14.6.5. Rail transport

| | |
|---|---------------------------|
| Classification code (RID) | : M6 |
| Special provisions (RID) | : 274, 335, 601 |
| Limited quantities (RID) | : 5L |
| Excepted quantities (RID) | : E1 |
| Packing instructions (RID) | : P001, IBC03, LP01, R001 |
| Special packing provisions (RID) | : PP1 |
| Mixed packing provisions (RID) | : MP19 |
| Portable tank and bulk container instructions (RID) | : T4 |
| Portable tank and bulk container special provisions (RID) | : TP1, TP29 |
| Tank codes for RID tanks (RID) | : LGBV |
| Transport category (RID) | : 3 |
| Special provisions for carriage – Packages (RID) | : W12 |
| Special provisions for carriage - Loading, unloading and handling (RID) | : CW13, CW31 |
| Colis express (express parcels) (RID) | : CE8 |
| Hazard identification number (RID) | : 90 |
| Carriage prohibited (RID) | : No |

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

15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

| | |
|--|--|
| 3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008 | SINGLE ELEMENT STANDARD SOLUTION FOR AAS - SILVER 1000 mg/l (B001) |
|--|--|

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.1.2. National regulations

Germany

Water hazard class (WGK) : 1 - low hazard to waters
 WGK remark : Classification water polluting based on the components in compliance with
 Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 4)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE
 COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and
 mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending
 Regulation (EC) No 1907/2006.

Other information : None.

Full text of R-, H- and EUH-phrases:

| | |
|---------------------|---|
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Aquatic Acute 1 | Hazardous to the aquatic environment — Acute Hazard, Category 1 |
| Aquatic Chronic 1 | Hazardous to the aquatic environment — Chronic Hazard, Category 1 |
| Ox. Liq. 3 | Oxidising Liquids, Category 3 |
| Ox. Sol. 2 | Oxidising Solids, Category 2 |
| Skin Corr. 1A | Skin corrosion/irritation, Category 1A |
| Skin Corr. 1B | Skin corrosion/irritation, Category 1B |
| H272 | May intensify fire; oxidiser |
| 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 |
| R34 | Causes burns |
| R35 | Causes severe burns |
| R50/53 | Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment |
| R8 | Contact with combustible material may cause fire |
| C | Corrosive |
| N | Dangerous for the environment |
| O | Oxidising |

SDS EU Mod H F (REACH ANNEX II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.