

Suma Silver D8

Revision: 2015-06-03

Version: 03.0

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

1.1 Product identifier

Trade name: Suma Silver D8

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

Identified uses:

For professional use only.

AISE-P316 - Metal cleaning agent. Manual process

Uses advised against: Uses other than those identified are not recommended

1.3 Details of the supplier of the safety data sheet

Diversey Europe Operations BV, Maarssenbroeksedijk 2, 3542DN Utrecht, The Netherlands

Contact details

Diversey Ltd

Weston Favell Centre, Northampton NN3 8PD, United Kingdom

Tel: 01604 405311, Fax: 01604 406809

Regulatory Email: MSDSinfoUK@sealedair.com

1.4 Emergency telephone number

For medical or environmental emergency only:

call 0800 052 0185

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

The product has been classified and labelled in accordance with Regulation (EC) No 1272/2008.

Carc. 2 (H351)

Repr. 2 (H361)

Eye Irrit. 2 (H319)

Aquatic Chronic 3 (H412)

Classification in accordance with Directive 1999/45/EC and corresponding national legislation

Indication of danger

C - Corrosive

Risk phrases:

R35 - Causes severe burns.

R40 - Limited evidence of a carcinogenic effect.

R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2 Label elements



Signal word: Warning.

Contains thiourea (Thiourea).

Hazard statements:

H351 - Suspected of causing cancer.

H361 - Suspected of damaging fertility or the unborn child.

H319 - Causes serious eye irritation.

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H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements:

P280 - Wear protective gloves, protective clothing and eye or face protection.

2.3 Other hazards

No other hazards known. The product does not meet the criteria for PBT or vPvB in accordance with Regulation (EC) No 1907/2006, Annex XIII.

SECTION 3: Composition/information on ingredients**3.2 Mixtures**

| Ingredient(s) | EC number | CAS number | REACH number | Classification | Classification (1999/45/EC) | Notes | Weight percent |
|--------------------------|-----------|------------|-------------------|---|--|-------|----------------|
| thiourea | 200-543-5 | 62-56-6 | No data available | Carc. 2 (H351) Repr. 2 (H361) Acute Tox. 4 (H302) Aquatic Chronic 2 (H411) | Xn;R22 Carc.Cat.3;R40 N;R51/53 Repr.Cat.3;R63 | | 3-10 |
| citric acid | 201-069-1 | 77-92-9 | [1] | Eye Irrit. 2 (H319) | Xi;R36 | | 1-3 |
| phosphoric acid | 231-633-2 | 7664-38-2 | 01-2119485924-24 | Skin Corr. 1B (H314) Met. Corr. 1 (H290) | C;R34 | | 1-3 |
| alkyl alcohol ethoxylate | Polymer* | 64425-86-1 | [4] | Acute Tox. 4 (H302) Eye Dam. 1 (H318) Aquatic Acute 1 (H400) | Xn;R22 Xi;R41 N;R50 | | 1-3 |

* Polymer.

For the full text of the R, H and EUH phrases mentioned in this Section, see Section 16.

Workplace exposure limit(s), if available, are listed in subsection 8.1.

[1] Exempted: ionic mixture. See Regulation (EC) No 1907/2006, Annex V, paragraph 3 and 4. This salt is potentially present, based on calculation, and included for classification and labelling purposes only. Each starting material of the ionic mixture is registered, as required.

[2] Exempted: included in Annex IV of Regulation (EC) No 1907/2006.

[3] Exempted: Annex V of Regulation (EC) No 1907/2006.

[4] Exempted: polymer. See Article 2(9) of Regulation (EC) No 1907/2006.

SECTION 4: First aid measures**4.1 Description of first aid measures****General Information:**

IF exposed or concerned: Get medical attention or advice.

Inhalation

Get medical attention or advice if you feel unwell.

Skin contact:

Wash skin with plenty of lukewarm, gently flowing water. If skin irritation occurs: Get medical advice or attention.

Eye contact:

Immediately rinse eyes cautiously with lukewarm water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation occurs and persists, get medical attention.

Ingestion:

Immediately drink 1 glass of water. Get medical attention or advice if you feel unwell.

Self-protection of first aider:

Consider personal protective equipment as indicated in subsection 8.2.

4.2 Most important symptoms and effects, both acute and delayed**Inhalation:**

Suspected of causing cancer. Suspected of damaging fertility or the unborn child.

Skin contact:

Suspected of causing cancer. Suspected of damaging fertility or the unborn child.

Eye contact:

Causes severe irritation.

Ingestion:

Suspected of causing cancer. Suspected of damaging fertility or the unborn child.

4.3 Indication of any immediate medical attention and special treatment needed

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

SECTION 5: Firefighting measures**5.1 Extinguishing media**

Carbon dioxide. Dry powder. Water spray jet. Fight larger fires with water spray jet or alcohol-resistant foam.

5.2 Special hazards arising from the substance or mixture

No special hazards known.

5.3 Advice for firefighters

As in any fire, wear self contained breathing apparatus and suitable protective clothing including gloves and eye/face protection.

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

Wear suitable protective clothing, gloves and eye/face protection.

6.2 Environmental precautions

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Do not allow to enter drainage system, surface or ground water. Do not allow to enter the ground/soil. Dilute with plenty of water. Inform responsible authorities in case undiluted product reaches drainage system, surface or ground water or the ground/soil.

6.3 Methods and material for containment and cleaning up

Absorb onto dry sand or similar inert material.

6.4 Reference to other sections

For personal protective equipment see subsection 8.2. For disposal considerations see section 13.

SECTION 7: Handling and storage**7.1 Precautions for safe handling****Measures to prevent fire and explosions:**

No special precautions required.

Measures required to protect the environment:

For environmental exposure controls see subsection 8.2.

Advices on general occupational hygiene:

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not mix with other products unless advised by Sealed Air. Wash hands before breaks and at the end of workday. Wash face, hands and any exposed skin thoroughly after handling. Take off immediately all contaminated clothing. Store used personal protective equipment separately. Use personal protective equipment as required. Obtain special instructions before use. Use only with adequate ventilation.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local and national regulations. Keep only in original container. Store in a closed container.

For conditions to avoid see subsection 10.4. For incompatible materials see subsection 10.5.

7.3 Specific end use(s)

No specific advice for end use available.

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****Workplace exposure limits**

Air limit values, if available:

| Ingredient(s) | UK - Long term value(s) | UK - Short term value(s) |
|-----------------|-------------------------|--------------------------|
| phosphoric acid | 1 mg/m ³ | 2 mg/m ³ |

Biological limit values, if available:

Recommended monitoring procedures, if available:

Additional exposure limits under the conditions of use, if available:

DNEL/DMEL and PNEC values**Human exposure**

DNEL oral exposure - Consumer (mg/kg bw)

| Ingredient(s) | Short term - Local effects | Short term - Systemic effects | Long term - Local effects | Long term - Systemic effects |
|--------------------------|----------------------------|-------------------------------|---------------------------|------------------------------|
| thiourea | No data available | No data available | No data available | No data available |
| citric acid | - | - | - | - |
| phosphoric acid | - | - | - | - |
| alkyl alcohol ethoxylate | No data available | No data available | No data available | No data available |

DNEL dermal exposure - Worker

| Ingredient(s) | Short term - Local effects | Short term - Systemic effects (mg/kg bw) | Long term - Local effects | Long term - Systemic effects (mg/kg bw) |
|--------------------------|----------------------------|--|---------------------------|---|
| thiourea | No data available | No data available | No data available | No data available |
| citric acid | No data available | - | No data available | - |
| phosphoric acid | No data available | - | No data available | - |
| alkyl alcohol ethoxylate | No data available | No data available | No data available | No data available |

DNEL dermal exposure - Consumer

| Ingredient(s) | Short term - Local effects | Short term - Systemic effects (mg/kg bw) | Long term - Local effects | Long term - Systemic effects (mg/kg bw) |
|--------------------------|----------------------------|--|---------------------------|---|
| thiourea | No data available | No data available | No data available | No data available |
| citric acid | No data available | - | No data available | - |
| phosphoric acid | No data available | - | No data available | - |
| alkyl alcohol ethoxylate | No data available | No data available | No data available | No data available |

DNEL inhalatory exposure - Worker (mg/m³)

| Ingredient(s) | Short term - Local effects | Short term - Systemic effects | Long term - Local effects | Long term - Systemic effects |
|---------------|----------------------------|-------------------------------|---------------------------|------------------------------|
| | | | | |

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| | | | | |
|--------------------------|-------------------|-------------------|-------------------|-------------------|
| thiourea | No data available | No data available | No data available | No data available |
| citric acid | - | - | - | - |
| phosphoric acid | - | - | 2.92 | - |
| alkyl alcohol ethoxylate | No data available | No data available | No data available | No data available |

DNEL inhalatory exposure - Consumer (mg/m³)

| Ingredient(s) | Short term - Local effects | Short term - Systemic effects | Long term - Local effects | Long term - Systemic effects |
|--------------------------|----------------------------|-------------------------------|---------------------------|------------------------------|
| thiourea | No data available | No data available | No data available | No data available |
| citric acid | - | - | - | - |
| phosphoric acid | - | - | 0.73 | - |
| alkyl alcohol ethoxylate | No data available | No data available | No data available | No data available |

Environmental exposure

Environmental exposure - PNEC

| Ingredient(s) | Surface water, fresh (mg/l) | Surface water, marine (mg/l) | Intermittent (mg/l) | Sewage treatment plant (mg/l) |
|--------------------------|-----------------------------|------------------------------|---------------------|-------------------------------|
| thiourea | No data available | No data available | No data available | No data available |
| citric acid | 0.44 | 0.044 | - | > 1000 |
| phosphoric acid | - | - | - | - |
| alkyl alcohol ethoxylate | No data available | No data available | No data available | No data available |

Environmental exposure - PNEC, continued

| Ingredient(s) | Sediment, freshwater (mg/kg) | Sediment, marine (mg/kg) | Soil (mg/kg) | Air (mg/m ³) |
|--------------------------|------------------------------|--------------------------|-------------------|--------------------------|
| thiourea | No data available | No data available | No data available | No data available |
| citric acid | 34.6 | 3.46 | 33.1 | - |
| phosphoric acid | - | - | - | - |
| alkyl alcohol ethoxylate | No data available | No data available | No data available | No data available |

8.2 Exposure controls

The following information applies for the uses indicated in subsection 1.2.

If available, please refer to the product information sheet for application and handling instructions.

Normal use conditions are assumed for this section.

Recommended safety measures for handling the undiluted product:

Appropriate engineering controls: No special requirements under normal use conditions.
Appropriate organisational controls: Avoid direct contact and/or splashes where possible. Train personnel.

Personal protective equipment**Eye / face protection:**

Safety glasses or goggles (EN 166).

Hand protection:

Chemical-resistant protective gloves (EN 374).

Verify instructions regarding permeability and breakthrough time, as provided by the gloves supplier.

Consider specific local use conditions, such as risk of splashes, cuts, contact time and temperature.

Suggested gloves for prolonged contact:

Material: butyl rubber

Penetration time: >= 480 min

Material thickness: >= 0.7 mm

Suggested gloves for protection against splashes:

Material: nitrile rubber

Penetration time: >= 30 min

Material thickness: >= 0.4 mm

In consultation with the supplier of protective gloves a different type providing similar protection may be chosen.

Body protection:

Wear chemical-resistant clothing and boots in case direct dermal exposure and/or splashes may occur.

Respiratory protection:

No special requirements under normal use conditions.

Environmental exposure controls:

Should not reach sewage water or drainage ditch undiluted or unneutralised.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

Information in this section refers to the product, unless it is specifically stated that substance data is listed

Method / remark

Physical State: Liquid
Colour: Clear, Orange
Odour: Product specific

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Odour threshold: Not applicable

pH: =< 2 (neat)

Melting point/freezing point (°C): Not determined

Initial boiling point and boiling range (°C): Not determined

Substance data, boiling point

| Ingredient(s) | Value (°C) | Method | Atmospheric pressure (hPa) |
|--------------------------|-------------------|------------------|----------------------------|
| thiourea | No data available | | |
| citric acid | No data available | | |
| phosphoric acid | 158 | Method not given | 1013 |
| alkyl alcohol ethoxylate | No data available | | |

Method / remark

Flash point (°C): Not applicable.

Sustained combustion: Not determined

Evaporation rate: Not determined

Flammability (solid, gas): Not applicable to liquids

Upper/lower flammability limit (%): Not determined

Substance data, flammability or explosive limits, if available:

Method / remark

Vapour pressure: Not determined

Substance data, vapour pressure

| Ingredient(s) | Value (Pa) | Method | Temperature (°C) |
|--------------------------|-------------------|------------------|------------------|
| thiourea | No data available | | |
| citric acid | No data available | | |
| phosphoric acid | 4 | Method not given | 20 |
| alkyl alcohol ethoxylate | No data available | | |

Method / remark

Vapour density: Not determined

Relative density: 1.03 g/cm³ (20 °C)

Solubility in / Miscibility with Water: Fully miscible

Substance data, solubility in water

| Ingredient(s) | Value (g/l) | Method | Temperature (°C) |
|--------------------------|-------------------|------------------|------------------|
| thiourea | Soluble | | |
| citric acid | 1630 | Method not given | |
| phosphoric acid | Soluble | | |
| alkyl alcohol ethoxylate | No data available | | |

Substance data, partition coefficient n-octanol/water (log Kow): see subsection 12.3

Method / remark

Autoignition temperature: Not determined

Decomposition temperature: Not determined

Viscosity: Not determined

Explosive properties: Not explosive.

Oxidising properties: Not oxidising

9.2 Other information

Surface tension (N/m): Not determined

Corrosion to metals: Not determined

Substance data, dissociation constant, if available:

SECTION 10: Stability and reactivity

10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability

Stable under normal storage and use conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions known under normal storage and use conditions.

10.4 Conditions to avoid

None known under normal storage and use conditions.

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10.5 Incompatible materials

Reacts with alkali. Keep away from products containing chlorine-based bleaching agents or sulphites.

10.6 Hazardous decomposition products

None known under normal storage and use conditions.

SECTION 11: Toxicological information**11.1 Information on toxicological effects**

Mixture data:

Relevant calculated ATE(s):

Substance data, where relevant and available, are listed below.

Acute toxicity

Acute oral toxicity

| Ingredient(s) | Endpoint | Value (mg/kg) | Species | Method | Exposure time (h) |
|--------------------------|------------------|-------------------|---------|------------------------|-------------------|
| thiourea | LD ₅₀ | 1750 | Rat | Method not given | |
| citric acid | LD ₅₀ | 3000 | Rat | Method not given | |
| phosphoric acid | LD ₅₀ | 2600 | Rat | OECD 423 (EU B.1 tris) | - |
| alkyl alcohol ethoxylate | | No data available | | | |

Acute dermal toxicity

| Ingredient(s) | Endpoint | Value (mg/kg) | Species | Method | Exposure time (h) |
|--------------------------|------------------|-------------------|---------|------------------|-------------------|
| thiourea | LD ₅₀ | 2800 | Rat | Method not given | |
| citric acid | LD ₅₀ | > 2000 | Rat | Method not given | |
| phosphoric acid | LD ₅₀ | 2740 | Rabbit | Method not given | - |
| alkyl alcohol ethoxylate | | No data available | | | |

Acute inhalative toxicity

| Ingredient(s) | Endpoint | Value (mg/l) | Species | Method | Exposure time (h) |
|--------------------------|------------------|-------------------|---------|------------------|-------------------|
| thiourea | | No data available | | | |
| citric acid | | No data available | | | |
| phosphoric acid | LC ₅₀ | 850 | Rat | Method not given | 2 |
| alkyl alcohol ethoxylate | | No data available | | | |

Irritation and corrosivity

Skin irritation and corrosivity

| Ingredient(s) | Result | Species | Method | Exposure time |
|--------------------------|-------------------|---------|-------------------|---------------|
| thiourea | No data available | | | |
| citric acid | Not irritant | Rabbit | OECD 404 (EU B.4) | |
| phosphoric acid | Corrosive | Rabbit | OECD 404 (EU B.4) | |
| alkyl alcohol ethoxylate | No data available | | | |

Eye irritation and corrosivity

| Ingredient(s) | Result | Species | Method | Exposure time |
|--------------------------|-------------------|---------|-------------------|---------------|
| thiourea | No data available | | | |
| citric acid | Severe damage | Rabbit | OECD 405 (EU B.5) | |
| phosphoric acid | Severe damage | Rabbit | Method not given | |
| alkyl alcohol ethoxylate | No data available | | | |

Respiratory tract irritation and corrosivity

| Ingredient(s) | Result | Species | Method | Exposure time |
|--------------------------|-------------------|---------|--------|---------------|
| thiourea | No data available | | | |
| citric acid | No data available | | | |
| phosphoric acid | No data available | | | |
| alkyl alcohol ethoxylate | No data available | | | |

Sensitisation

Sensitisation by skin contact

| Ingredient(s) | Result | Species | Method | Exposure time (h) |
|---------------|-------------------|---------|--------|-------------------|
| thiourea | No data available | | | |

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|--------------------------|-------------------|------------|------------------|---|
| citric acid | Not sensitising | Guinea pig | Method not given | |
| phosphoric acid | Not sensitising | Human | Human experience | - |
| alkyl alcohol ethoxylate | No data available | | | |

Sensitisation by inhalation

| Ingredient(s) | Result | Species | Method | Exposure time |
|--------------------------|-------------------|---------|--------|---------------|
| thiourea | No data available | | | |
| citric acid | No data available | | | |
| phosphoric acid | No data available | | | - |
| alkyl alcohol ethoxylate | No data available | | | |

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Mutagenicity

| Ingredient(s) | Result (in-vitro) | Method (in-vitro) | Result (in-vivo) | Method (in-vivo) |
|--------------------------|---|--|--|------------------|
| thiourea | No data available | | No data available | |
| citric acid | No data available | | No evidence of genotoxicity, negative test results | Method not given |
| phosphoric acid | No evidence for mutagenicity, negative test results | OECD 471 (EU B.12/13) OECD 473 OECD 476 (Mouse lymphoma) | No data available | |
| alkyl alcohol ethoxylate | No data available | | No data available | |

Carcinogenicity

| Ingredient(s) | Effect |
|--------------------------|--|
| thiourea | Limited evidence of a carcinogenic effect. |
| citric acid | No evidence for carcinogenicity, negative test results |
| phosphoric acid | No data available |
| alkyl alcohol ethoxylate | No data available |

Toxicity for reproduction

| Ingredient(s) | Endpoint | Specific effect | Value (mg/kg bw/d) | Species | Method | Exposure time | Remarks and other effects reported |
|--------------------------|----------|------------------------|--------------------|---------|----------------|---------------|--|
| thiourea | | Teratogenic effects | No data available | | | | Indications of possible teratogenicity |
| citric acid | | | No data available | | | | No evidence for reproductive toxicity |
| phosphoric acid | NOAEL | Developmental toxicity | 410 | Rat | OECD 422, oral | 10 day(s) | No evidence for reproductive toxicity No evidence for developmental toxicity |
| alkyl alcohol ethoxylate | | | No data available | | | | |

Repeated dose toxicity

Sub-acute or sub-chronic oral toxicity

| Ingredient(s) | Endpoint | Value (mg/kg bw/d) | Species | Method | Exposure time (days) | Specific effects and organs affected |
|--------------------------|----------|--------------------|---------|----------------|----------------------|--------------------------------------|
| thiourea | | No data available | | | | |
| citric acid | | No data available | | | | |
| phosphoric acid | NOAEL | 250 | Rat | OECD 422, oral | - | |
| alkyl alcohol ethoxylate | | No data available | | | | |

Sub-chronic dermal toxicity

| Ingredient(s) | Endpoint | Value (mg/kg bw/d) | Species | Method | Exposure time (days) | Specific effects and organs affected |
|--------------------------|----------|--------------------|---------|--------|----------------------|--------------------------------------|
| thiourea | | No data available | | | | |
| citric acid | | No data available | | | | |
| phosphoric acid | | No data available | | | - | |
| alkyl alcohol ethoxylate | | No data available | | | | |

Sub-chronic inhalation toxicity

| Ingredient(s) | Endpoint | Value (mg/kg bw/d) | Species | Method | Exposure time (days) | Specific effects and organs affected |
|--------------------------|----------|--------------------|---------|--------|----------------------|--------------------------------------|
| thiourea | | No data available | | | | |
| citric acid | | No data available | | | | |
| phosphoric acid | | No data available | | | - | |
| alkyl alcohol ethoxylate | | No data available | | | | |

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|--|--|-----------|--|--|--|
| | | available | | | |
|--|--|-----------|--|--|--|

Chronic toxicity

| Ingredient(s) | Exposure route | Endpoint | Value (mg/kg bw/d) | Species | Method | Exposure time | Specific effects and organs affected | Remark |
|--------------------------|----------------|----------|--------------------|---------|--------|---------------|--------------------------------------|--------|
| thiourea | | | No data available | | | | | |
| citric acid | | | No data available | | | | | |
| phosphoric acid | | | No data available | | | | | |
| alkyl alcohol ethoxylate | | | No data available | | | | | |

STOT-single exposure

| Ingredient(s) | Affected organ(s) |
|--------------------------|-------------------|
| thiourea | No data available |
| citric acid | No data available |
| phosphoric acid | No data available |
| alkyl alcohol ethoxylate | No data available |

STOT-repeated exposure

| Ingredient(s) | Affected organ(s) |
|--------------------------|-------------------|
| thiourea | No data available |
| citric acid | No data available |
| phosphoric acid | No data available |
| alkyl alcohol ethoxylate | No data available |

Aspiration hazard

Substances with an aspiration hazard (H304), if any, are listed in section 3. If relevant, see section 9 for dynamic viscosity and relative density of the product.

Potential adverse health effects and symptoms

Effects and symptoms related to the product, if any, are listed in subsection 4.2.

SECTION 12: Ecological information

12.1 Toxicity

No data is available on the mixture.

Substance data, where relevant and available, are listed below

Aquatic short-term toxicity

Aquatic short-term toxicity - fish

| Ingredient(s) | Endpoint | Value (mg/l) | Species | Method | Exposure time (h) |
|--------------------------|------------------|-------------------|-------------------------|------------------|-------------------|
| thiourea | | No data available | | | - |
| citric acid | LC ₅₀ | 440 | <i>Leuciscus idus</i> | Method not given | 48 |
| phosphoric acid | LC ₅₀ | 138 | <i>Gambusia affinis</i> | Method not given | 96 |
| alkyl alcohol ethoxylate | | No data available | | | |

Aquatic short-term toxicity - crustacea

| Ingredient(s) | Endpoint | Value (mg/l) | Species | Method | Exposure time (h) |
|--------------------------|------------------|-------------------|-----------------------------|------------------|-------------------|
| thiourea | EC ₅₀ | 9 | <i>Daphnia magna Straus</i> | Method not given | 48 |
| citric acid | EC ₅₀ | 1535 | <i>Daphnia magna Straus</i> | Method not given | 24 |
| phosphoric acid | EC ₅₀ | > 100 | <i>Daphnia magna Straus</i> | OECD 202 | 48 |
| alkyl alcohol ethoxylate | | No data available | | | |

Aquatic short-term toxicity - algae

| Ingredient(s) | Endpoint | Value (mg/l) | Species | Method | Exposure time (h) |
|--------------------------|------------------|-------------------|--------------------------------|------------------|-------------------|
| thiourea | | No data available | | | - |
| citric acid | LC ₅₀ | 425 | <i>Scenedesmus quadricauda</i> | Method not given | 168 |
| phosphoric acid | EC ₅₀ | > 100 | <i>Desmodesmus subspicatus</i> | OECD 201 | 72 |
| alkyl alcohol ethoxylate | | No data available | | | |

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Aquatic short-term toxicity - marine species

| Ingredient(s) | Endpoint | Value (mg/l) | Species | Method | Exposure time (days) |
|--------------------------|----------|-------------------|---------|--------|----------------------|
| thiourea | | No data available | | | - |
| citric acid | | No data available | | | - |
| phosphoric acid | | No data available | | | - |
| alkyl alcohol ethoxylate | | No data available | | | |

Impact on sewage plants - toxicity to bacteria

| Ingredient(s) | Endpoint | Value (mg/l) | Inoculum | Method | Exposure time |
|--------------------------|------------------|-------------------|---------------------------|------------------|---------------|
| thiourea | | No data available | | | |
| citric acid | EC ₅₀ | > 10000 | <i>Pseudomonas putida</i> | Method not given | 16 hour(s) |
| phosphoric acid | EC ₅₀ | 270 | <i>Activated sludge</i> | Method not given | |
| alkyl alcohol ethoxylate | | No data available | | | |

Aquatic long-term toxicity

Aquatic long-term toxicity - fish

| Ingredient(s) | Endpoint | Value (mg/l) | Species | Method | Exposure time | Effects observed |
|--------------------------|----------|-------------------|---------|--------|---------------|------------------|
| thiourea | | No data available | | | | |
| citric acid | | No data available | | | | |
| phosphoric acid | | No data available | | | | |
| alkyl alcohol ethoxylate | | No data available | | | | |

Aquatic long-term toxicity - crustacea

| Ingredient(s) | Endpoint | Value (mg/l) | Species | Method | Exposure time | Effects observed |
|--------------------------|----------|-------------------|---------|--------|---------------|------------------|
| thiourea | | No data available | | | | |
| citric acid | | No data available | | | | |
| phosphoric acid | | No data available | | | | |
| alkyl alcohol ethoxylate | | No data available | | | | |

Aquatic toxicity to other aquatic benthic organisms, including sediment-dwelling organisms, if available:

| Ingredient(s) | Endpoint | Value (mg/kg dw sediment) | Species | Method | Exposure time (days) | Effects observed |
|--------------------------|----------|---------------------------|---------|--------|----------------------|------------------|
| thiourea | | No data available | | | - | |
| citric acid | | No data available | | | - | |
| phosphoric acid | | No data available | | | - | |
| alkyl alcohol ethoxylate | | No data available | | | | |

Terrestrial toxicity

Terrestrial toxicity - soil invertebrates, including earthworms, if available:

| Ingredient(s) | Endpoint | Value (mg/kg dw soil) | Species | Method | Exposure time (days) | Effects observed |
|-----------------|----------|-----------------------|---------|--------|----------------------|------------------|
| thiourea | | No data available | | | - | |
| citric acid | | No data available | | | - | |
| phosphoric acid | | No data available | | | - | |

Terrestrial toxicity - plants, if available:

| Ingredient(s) | Endpoint | Value (mg/kg dw soil) | Species | Method | Exposure time (days) | Effects observed |
|-----------------|----------|-----------------------|---------|--------|----------------------|------------------|
| thiourea | | No data available | | | - | |
| citric acid | | No data available | | | - | |
| phosphoric acid | | No data available | | | - | |

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Terrestrial toxicity - birds, if available:

| Ingredient(s) | Endpoint | Value | Species | Method | Exposure time (days) | Effects observed |
|-----------------|----------|-------------------|---------|--------|----------------------|------------------|
| thiourea | | No data available | | | - | |
| citric acid | | No data available | | | - | |
| phosphoric acid | | No data available | | | - | |

Terrestrial toxicity - beneficial insects, if available:

| Ingredient(s) | Endpoint | Value (mg/kg dw soil) | Species | Method | Exposure time (days) | Effects observed |
|-----------------|----------|-----------------------|---------|--------|----------------------|------------------|
| thiourea | | No data available | | | - | |
| citric acid | | No data available | | | - | |
| phosphoric acid | | No data available | | | - | |

Terrestrial toxicity - soil bacteria, if available:

| Ingredient(s) | Endpoint | Value (mg/kg dw soil) | Species | Method | Exposure time (days) | Effects observed |
|-----------------|----------|-----------------------|---------|--------|----------------------|------------------|
| thiourea | | No data available | | | - | |
| citric acid | | No data available | | | - | |
| phosphoric acid | | No data available | | | - | |

12.2 Persistence and degradability**Abiotic degradation**

Abiotic degradation - photodegradation in air, if available:

Abiotic degradation - hydrolysis, if available:

Abiotic degradation - other processes, if available:

Biodegradation

Ready biodegradability - aerobic conditions

| Ingredient(s) | Inoculum | Analytical method | DT ₅₀ | Method | Evaluation |
|--------------------------|----------|-------------------|-------------------|------------------|--------------------------------------|
| thiourea | | | | | Not readily biodegradable. |
| citric acid | | | 97 % in 28 day(s) | Method not given | Readily biodegradable |
| phosphoric acid | | | | | Not applicable (inorganic substance) |
| alkyl alcohol ethoxylate | | | | | No data available |

Ready biodegradability - anaerobic and marine conditions, if available:

Degradation in relevant environmental compartments, if available:

The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

12.3 Bioaccumulative potentialPartition coefficient n-octanol/water (log K_{ow})

| Ingredient(s) | Value | Method | Evaluation | Remark |
|--------------------------|-------------------|------------------|-----------------------------|--------|
| thiourea | < 1 | Method not given | No bioaccumulation expected | |
| citric acid | -1.72 | | No bioaccumulation expected | |
| phosphoric acid | No data available | | No bioaccumulation expected | |
| alkyl alcohol ethoxylate | No data available | | | |

Bioconcentration factor (BCF)

| Ingredient(s) | Value | Species | Method | Evaluation | Remark |
|--------------------------|-------------------|---------|--------|-----------------------------|--------|
| thiourea | No data available | | | | |
| citric acid | No data available | | | | |
| phosphoric acid | No data available | | | No bioaccumulation expected | |
| alkyl alcohol ethoxylate | No data available | | | | |

12.4 Mobility in soil

Adsorption/Desorption to soil or sediment

| Ingredient(s) | Adsorption coefficient Log K _{oc} | Desorption coefficient Log K _{oc} (des) | Method | Soil/sediment type | Evaluation |
|---------------|--|--|--------|--------------------|------------|
| | | | | | |

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| | | | | | |
|--------------------------|-------------------|--|--|--|--|
| thiourea | No data available | | | | High potential for mobility in soil |
| citric acid | No data available | | | | Potential for mobility in soil, soluble in water |
| phosphoric acid | No data available | | | | Potential for mobility in soil, soluble in water |
| alkyl alcohol ethoxylate | No data available | | | | |

12.5 Results of PBT and vPvB assessment

Substances that fulfill the criteria for PBT/vPvB, if any, are listed in section 3.

12.6 Other adverse effects

No other adverse effects known.

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Waste from residues / unused products:**

The concentrated contents or contaminated packaging should be disposed of by a certified handler or according to the site permit. Release of waste to sewers is discouraged. The cleaned packaging material is suitable for energy recovery or recycling in line with local legislation.
20 01 14* - acids.

European Waste Catalogue:**Empty packaging****Recommendation:**

Dispose of observing national or local regulations.

Suitable cleaning agents:

Water, if necessary with cleaning agent.

SECTION 14: Transport information**ADR, RID, ADN, IMO/IMDG, ICAO/IATA**

14.1 UN number: 1805

14.2 UN proper shipping name:

Phosphoric acid, solution

14.3 Transport hazard class(es):

Class: 8

Label(s): 8

14.4 Packing group: III

14.5 Environmental hazards:

Environmentally hazardous: No

Marine pollutant: No

14.6 Special precautions for user: None known.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: The product is not transported in bulk tankers.

Other relevant information:**ADR**

Classification code: C1

Tunnel restriction code: E

Hazard identification number: 80

IMO/IMDG

EmS: F-A, S-B

The product has been classified, labelled and packaged in accordance with the requirements of ADR and the provisions of the IMDG Code. Transport regulations include special provisions for certain classes of dangerous goods packed in limited quantities.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Authorisations or restrictions (Regulation (EC) No 1907/2006, Title VII respectively Title VIII): Not applicable.

Ingredients according to EC Detergents Regulation 648/2004

anionic surfactants, non-ionic surfactants

< 5%

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out on the mixture

SECTION 16: Other information

The information in this document is based on our best present knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally binding contract

SDS code: MSDS6980**Version:** 03.0**Revision:** 2015-06-03**Reason for revision:**

Overall design adjusted in accordance with Amendment 453/2010, Annex II of Regulation (EC) No 1907/2006

Classification procedure

The classification of the mixture is in general based on calculation methods using substance data, as required by Regulation (EC) No 1272/2008. If for certain classifications data on the mixture is available or for example bridging principles or weight of evidence can be used for classification, this will be indicated in the relevant sections of the Safety Data Sheet. See section 9 for physical chemical properties, section 11 for toxicological information and section 12 for ecological information.

Full text of the R, H and EUH phrases mentioned in section 3:

- H290 - May be corrosive to metals.
- H302 - Harmful if swallowed.
- H314 - Causes severe skin burns and eye damage.
- H318 - Causes serious eye damage.
- H319 - Causes serious eye irritation.
- H351 - Suspected of causing cancer.
- H361 - Suspected of damaging fertility or the unborn child.
- H400 - Very toxic to aquatic life.
- H411 - Toxic to aquatic life with long lasting effects.
- R22 - Harmful if swallowed.
- R34 - Causes burns.
- R36 - Irritating to eyes.
- R40 - Limited evidence of a carcinogenic effect.
- R41 - Risk of serious damage to eyes.
- R50 - Very toxic to aquatic organisms.
- R63 - Possible risk of harm to the unborn child.
- R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Abbreviations and acronyms:

- AISE - The international Association for Soaps, Detergents and Maintenance Products
- DNEL - Derived No Effect Limit
- EUH - CLP Specific hazard statement
- PBT - Persistent, Bioaccumulative and Toxic
- PNEC - Predicted No Effect Concentration
- REACH number - REACH registration number, without supplier specific part
- vPvB - very Persistent and very Bioaccumulative
- ATE - Acute Toxicity Estimate

End of Safety Data Sheet