

## Safety Data Sheet

According to Regulation (EC) No 1907/2006

## **Super Dilac VA4**

**Revision:** 2018-01-25 **Version:** 06.1

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

#### 1.1 Product identifier

Trade name: Super Dilac VA4

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

Identified uses:

For industrial use only.

AISE-P801 - Food process cleaner. Cleaning In place (CIP) 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: customerservice.uk@diversey.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

Skin Corr. 1A (H314)

EUH071

Met. Corr. 1 (H290)

#### 2.2 Label elements



Signal word: Danger.

Contains nitric acid (Nitric Acid).

#### Hazard statements:

H314 - Causes severe skin burns and eye damage.

EUH071 - Corrosive to the respiratory tract.

H290 - May be corrosive to metals.

#### Precautionary statements:

P260 - Do not breathe vapours.

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

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

P310 - Immediately call a POISON CENTRE, doctor or physician.

#### 2.3 Other hazards

No other hazards known

## **SECTION 3: Composition/information on ingredients**

#### 3.2 Mixtures

| Ingredient(s)   | EC number | CAS number | REACH number     | Classification       | Notes | Weight  |
|-----------------|-----------|------------|------------------|----------------------|-------|---------|
|                 |           |            |                  |                      |       | percent |
| nitric acid     | 231-714-2 | 7697-37-2  | 01-2119487297-23 | Ox. Liq. 3 (H272)    |       | 30-50   |
|                 |           |            |                  | Skin Corr. 1A (H314) |       |         |
|                 |           |            |                  | EUH071               |       |         |
|                 |           |            |                  | Met. Corr. 1 (H290)  |       |         |
| phosphoric acid | 231-633-2 | 7664-38-2  | 01-2119485924-24 | Skin Corr. 1B (H314) |       | 3-10    |
|                 |           |            |                  | Acute Tox. 5 (H303)  |       |         |
|                 |           |            |                  | Met. Corr. 1 (H290)  |       |         |

<sup>\*</sup> Polymer.

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.

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

#### **SECTION 4: First aid measures**

4.1 Description of first aid measures

General Information: If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery

position and seek medical advice. Provide fresh air. No mouth-to-mouth or mouth-to-nose

resuscitation. Use Ambu bag or ventilator.

Inhalation: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON

CENTRE, doctor or physician.

**Skin contact:** Wash skin with plenty of lukewarm, gently flowing water for at least 30 minutes. Take off

immediately all contaminated clothing and wash it before re-use. Immediately call a POISON

CENTRE, doctor or physician.

**Eye contact:** Hold eyelids apart and flush eyes with plenty of lukewarm water for at least 15 minutes. Remove

contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE,

doctor or physician.

Ingestion: Rinse mouth. Immediately drink 1 glass of water. Never give anything by mouth to an unconscious

person. Do NOT induce vomiting. Keep at rest. Immediately call a POISON CENTRE, doctor or

physician.

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:** Corrosive to the respiratory tract.

**Skin contact:** Causes severe burns.

**Eye contact:** Causes severe or permanent damage.

**Ingestion:** Ingestion will lead to a strong caustic effect on mouth and throat and to the danger of perforation of

oesophagus and stomach.

#### 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

Ensure adequate ventilation. Do not breathe dust or vapour. Wear suitable protective clothing, gloves and eye/face protection.

#### 6.2 Environmental precautions

Do not allow to enter drainage system, surface or ground water. Dilute with plenty of water.

#### 6.3 Methods and material for containment and cleaning up

Use neutralising agent. Absorb onto dry sand or similar inert material. Ensure adequate ventilation.

#### 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 adviced by Diversey. 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. Wash contaminated clothing before reuse. Use personal protective equipment as required. Avoid contact with skin and eyes. Do not breathe vapours. 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<br>value(s) | UK - Short term value(s) |
|-----------------|----------------------------|--------------------------|
| nitric acid     |                            | 1 ppm                    |
|                 |                            | 2.6 mg/m <sup>3</sup>    |
| phosphoric acid | 1 mg/m <sup>3</sup>        | 2 mg/m <sup>3</sup>      |

Biological limit values, 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 |
|-----------------|----------------------------|-------------------------------|---------------------------|------------------------------|
| nitric acid     | -                          | -                             | -                         | -                            |
| phosphoric acid | -                          | -                             | -                         | -                            |

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) |
|-----------------|----------------------------|--|---------------------------|---|
| nitric acid     | -                          | -  | -                         | -                                       |
| phosphoric acid | 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) |
|-----------------|----------------------------|--|---------------------------|---|
| nitric acid     | -                          | -  | -                         | -                                       |
| phosphoric acid | 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 |
|-----------------|----------------------------|-------------------------------|---------------------------|------------------------------|
| nitric acid     | No data available          | -                             | 2.6                       | -                            |
| phosphoric acid | =                          | -                             | 2.92                      | =                            |

DNEL inhalatory exposure - Consumer (mg/m³)

| Ingredient(s)   | Short term - Local effects | Short term - Systemic effects | Long term - Local effects | Long term - Systemic effects |
|-----------------|----------------------------|-------------------------------|---------------------------|------------------------------|
| nitric acid     | No data available          | -                             | 1.3                       | -                            |
| phosphoric acid | =                          | -                             | 0.73                      | =                            |

#### **Environmental exposure**

Environmental exposure - PNEC

| Ingredient(s) | Surface water, fresh | Surface water, marine | Intermittent (mg/l) | Sewage treatment |
|---------------|----------------------|-----------------------|---------------------|------------------|
|---------------|----------------------|-----------------------|---------------------|------------------|

|                 | (mg/l) | (mg/l) |   | plant (mg/l) |
|-----------------|--------|--------|---|--------------|
| nitric acid     | -      | -      | - | -            |
| phosphoric acid | -      | -      | - | -            |

Environmental exposure - PNEC, continued

| Ingredient(s)   | Sediment, freshwater (mg/kg) | Sediment, marine<br>(mg/kg) | Soil (mg/kg) | Air (mg/m³) |
|-----------------|------------------------------|-----------------------------|--------------|-------------|
| nitric acid     | -                            | -                           | -            | -           |
| phosphoric acid | -                            | -                           | -            | -           |

#### 8.2 Exposure controls

The following information applies for the uses indicated in subsection 1.2 of the Safety Data Sheet. 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:

Covering activities such as filling and transfer of product to application equipment, flasks or buckets

Appropriate engineering controls: If the product is diluted by using specific dosing systems with no risk of splashes or direct skin

contact, the personal protection equipment as described in this section is not required.

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). The use of a full-face shield or other full-face protection is

strongly recommended when handling open containers or if splashes may occur.

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 (EN 14605).

**Respiratory protection:** Respiratory protection is not normally required. However, inhalation of vapour, spray, gas or

aerosols should be avoided.

Environmental exposure controls: Should not reach sewage water or drainage ditch undiluted or unneutralised.

Recommended safety measures for handling the <u>diluted</u> product:

Recommended maximum concentration (%): 13

Appropriate engineering controls: No special requirements under normal use conditions. Provide a good standard of general

ventilation.

Appropriate organisational controls: Avoid direct contact and/or splashes where possible. Train personnel.

Personal protective equipment

Eye / face protection: 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:** No special requirements under normal use conditions.

**Respiratory protection:** Respiratory protection is not normally required. However, inhalation of vapour, spray, gas or

aerosols should be avoided.

**Environmental exposure controls:** No special requirements under normal use conditions.

#### 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, Colourless Odour: Product specific Odour threshold: Not applicable

**pH**: < 2 (neat)

Not relevant to classification of this product Melting point/freezing point (°C): Not determined See substance data

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

Substance data, boiling point

| Ingredient(s)   | Value<br>(°C) | Method           | Atmospheric pressure (hPa) |
|-----------------|---------------|------------------|----------------------------|
| nitric acid     | 116           | Method not given |                            |
| phosphoric acid | 158           | Method not given | 1013                       |

Method / remark

ISO 4316

Flash point (°C): Not applicable. Sustained combustion: Not applicable. (UN Manual of Tests and Criteria, section 32, L.2) 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 See substance data

Vapour pressure: Not determined

Substance data, vapour pressure

| Ingredient(s)   | Value<br>(Pa) | Method           | Temperature<br>(°C) |
|-----------------|---------------|------------------|---------------------|
| nitric acid     | 770           | Method not given | 20                  |
| phosphoric acid | 4             | Method not given | 20                  |

Method / remark

Not relevant to classification of this product

Not relevant to classification of this product

OECD 109 (EU A.3)

Vapour density: Not determined Relative density: ≈ 1.28 (20 °C)

Solubility in / Miscibility with Water: Fully miscible

Substance data, solubility in water

| Ingredient(s)   | Value<br>(g/l) | Method           | Temperature<br>(°C) |
|-----------------|----------------|------------------|---------------------|
| nitric acid     | > 500          | Method not given | ( )                 |
| phosphoric acid | Soluble        |                  |                     |

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

Autoignition temperature: Not determined

**Decomposition temperature:** Not applicable. Viscosity: Not determined

Explosive properties: Not explosive.

Oxidising properties: Not oxidising.

Method / remark

Not relevant to classification of this product

9.2 Other information

Surface tension (N/m): Not determined Not relevant to classification of this product

Corrosion to metals: Corrosive Weight of evidence

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.

#### 10.5 Incompatible materials

Reacts with alkali and metals. 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):

ATE - Oral (mg/kg): >5000

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

#### **Acute toxicity**

Acute oral toxicity

| Ingredient(s)   | Endpoint | Value<br>(mg/kg)     | Species | Method                 | Exposure time (h) |
|-----------------|----------|----------------------|---------|------------------------|-------------------|
| nitric acid     |          | No data<br>available |         |                        |                   |
| phosphoric acid | LD 50    | 2600                 | Rat     | OECD 423 (EU B.1 tris) |                   |

Acute dermal toxicity

| Ingredient(s)   | Endpoint | Value<br>(mg/kg) | Species | Method           | Exposure time (h) |
|-----------------|----------|------------------|---------|------------------|-------------------|
| nitric acid     |          | No data          |         |                  |                   |
|                 |          | available        |         |                  |                   |
| phosphoric acid | LD 50    | 2740             | Rabbit  | Method not given |                   |

Acute inhalative toxicity

| Ingredient(s)   | Endpoint | Value<br>(mg/l) | Species | Method            | Exposure time (h) |
|-----------------|----------|-----------------|---------|-------------------|-------------------|
| nitric acid     | LC 50    | > 2.65          | Rat     | OECD 403 (EU B.2) |                   |
| phosphoric acid | LC 50    | 850             | Rat     | Method not given  | 2                 |

#### Irritation and corrosivity

Skin irritation and corrosivity

| Ingredient(s)   | Result    | Species | Method            | Exposure time |
|-----------------|-----------|---------|-------------------|---------------|
| nitric acid     | Corrosive | Rabbit  | Method not given  |               |
| phosphoric acid | Corrosive | Rabbit  | OECD 404 (EU B.4) |               |

Eye irritation and corrosivity

|   | Ingredient(s)   | Result        | Species | Method           | Exposure time |
|---|-----------------|---------------|---------|------------------|---------------|
| ſ | nitric acid     | Corrosive     |         | Method not given |               |
| ĺ | phosphoric acid | Severe damage | Rabbit  | Method not given |               |

Respiratory tract irritation and corrosivity

|   | Ingredient(s)   | Result            | Species | Method | Exposure time |
|---|-----------------|-------------------|---------|--------|---------------|
|   | nitric acid     | No data available |         |        |               |
| Г | phosphoric acid | No data available |         |        |               |

#### Sensitisation

Sensitisation by skin contact

| Ingredient(s)   | Result            | Species | Method           | Exposure time (h) |
|-----------------|-------------------|---------|------------------|-------------------|
| nitric acid     | No data available |         |                  |                   |
| phosphoric acid | Not sensitising   | Human   | Human experience |                   |

Sensitisation by inhalation

| Ingredient(s)   | Result            | Species | Method | Exposure time |
|-----------------|-------------------|---------|--------|---------------|
| nitric acid     | No data available |         |        |               |
| phosphoric acid | No data available |         |        |               |

#### CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Mutagenicity

| Ingredient(s) | Result (in-vitro)                                   | Method<br>(in-vitro)          | Result (in-vivo)  | Method<br>(in-vivo) |
|---------------|---|-------------------------------|-------------------|---------------------|
|               | No evidence for mutagenicity, negative test results | OECD 471 (EU<br>B.12/13)      | No data available |                     |
|               | No evidence for mutagenicity, negative test results | OECD 471 (EU<br>B.12/13) OECD |                   |                     |

| 473 OECD 476 |  |
|--------------|--|
| (Mouse       |  |
| lymphoma)    |  |

Carcinogenicity

|   | Ingredient(s)   | Effect   |
|---|-----------------|--|
| ſ | nitric acid     | No evidence for carcinogenicity, negative test results |
| ſ | phosphoric acid | No data available                                      |

Toxicity for reproduction

| Ingredient(s)   | Endpoint | Specific effect        | Value        | Species | Method    | Exposure  | Remarks and other effects    |
|-----------------|----------|------------------------|--------------|---------|-----------|-----------|------------------------------|
|                 |          |                        | (mg/kg bw/d) |         |           | time      | reported                     |
| nitric acid     | NOAEL    | Developmental toxicity | 1500         | Rat     | OECD 422, | 28 day(s) | Not toxic for reproduction   |
|                 |          |                        |              |         | oral      |           |                              |
| phosphoric acid | NOAEL    | Developmental toxicity | 410          | Rat     | OECD 422, | 10 day(s) | No evidence for reproductive |
|                 |          | •                      |              |         | oral      |           | toxicity No evidence for     |
|                 |          |                        |              |         |           |           | developmental toxicity       |

Repeated dose toxicity

| Ingredient(s)   | Endpoint | Value<br>(mg/kg bw/d) | Species | Method    | Exposure time (days) | Specific effects and organs affected |
|-----------------|----------|-----------------------|---------|-----------|----------------------|--------------------------------------|
| nitric acid     | NOAEL    | 1500                  | Rat     | OECD 422, | 28                   |                                      |
|                 |          |                       |         | oral      |                      |                                      |
| phosphoric acid | NOAEL    | 250                   | Rat     | OECD 422, |                      |                                      |
|                 |          |                       |         | oral      |                      |                                      |

Sub-chronic dermal toxicity

| Ingredient(s)   | Endpoint | Value<br>(mg/kg bw/d) | Species | Method | Exposure time (days) | Specific effects and organs affected |
|-----------------|----------|-----------------------|---------|--------|----------------------|--------------------------------------|
| nitric acid     |          | No data               |         |        |                      |                                      |
|                 |          | available             |         |        |                      |                                      |
| phosphoric acid |          | No data               |         |        |                      |                                      |
|                 |          | available             |         |        |                      |                                      |

Sub-chronic inhalation toxicity

| oub cirronic initialation toxicity |          |              |         |        |             |                             |
|------------------------------------|----------|--------------|---------|--------|-------------|-----------------------------|
| Ingredient(s)                      | Endpoint | Value        | Species | Method | Exposure    | Specific effects and organs |
|                                    |          | (mg/kg bw/d) |         |        | time (days) | affected                    |
| nitric acid                        |          | No data      |         |        |             |                             |
|                                    |          | available    |         |        |             |                             |
| phosphoric acid                    |          | No data      |         |        |             |                             |
|                                    |          | available    |         |        |             |                             |

Chronic toxicity

| Ingredient(s)   | Exposure | Endpoint | Value        | Species | Method | Exposure | Specific effects and | Remark |
|-----------------|----------|----------|--------------|---------|--------|----------|----------------------|--------|
| ingrealent(s)   |          |          |              |         | Method |          |                      | Remark |
|                 | route    |          | (mg/kg bw/d) |         |        | time     | organs affected      |        |
| nitric acid     |          |          | No data      |         |        |          |                      |        |
|                 |          |          | available    |         |        |          |                      |        |
| phosphoric acid |          |          | No data      |         |        |          | _                    |        |
|                 |          |          | available    |         |        |          |                      |        |

STOT-single exposure

| Ingredient(s)   | Affected organ(s) |
|-----------------|-------------------|
| nitric acid     | No data available |
| phosphoric acid | No data available |

STOT-repeated exposure

| 3101-lepealed exposure |                   |
|------------------------|-------------------|
| Ingredient(s)          | Affected organ(s) |
| nitric acid            | No data available |
| phosphoric acid        | 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 to | oxicity - | fish |
|-----------------------|-----------|------|
|-----------------------|-----------|------|

| Ingredient(s)   | Endpoint | Value<br>(mg/l) | Species             | Method           | Exposure time (h) |
|-----------------|----------|-----------------|---------------------|------------------|-------------------|
| nitric acid     | LC 50    | 12.5            | Gambusia<br>affinis | Method not given | 96                |
| phosphoric acid | LC 50    | 138             | Gambusia<br>affinis | Method not given | 96                |

Aquatic short-term toxicity - crustacea

| Ingredient(s)   | Endpoint | Value<br>(mg/l) | Species                 | Method             | Exposure time (h) |
|-----------------|----------|-----------------|-------------------------|--------------------|-------------------|
| nitric acid     | EC 50    | 8609            | Daphnia<br>magna Straus | Non guideline test | 24                |
| phosphoric acid | EC 50    | > 100           | Daphnia<br>magna Straus | OECD 202 (EU C.2)  | 48                |

Aquatic short-term toxicity - algae

| Ingredient(s)   | Endpoint | Value<br>(mg/l) | Species     | Method            | Exposure time (h) |
|-----------------|----------|-----------------|-------------|-------------------|-------------------|
| nitric acid     |          | No data         |             |                   | -                 |
|                 |          | available       |             |                   |                   |
| phosphoric acid | EC 50    | > 100           | Desmodesmus | OECD 201 (EU C.3) | 72                |
|                 |          |                 | subspicatus |                   |                   |

Aquatic short-term toxicity - marine species

| Ingredient(s)   | Endpoint | Value<br>(mg/l) | Species | Method | Exposure time (days) |
|-----------------|----------|-----------------|---------|--------|----------------------|
| nitric acid     |          | No data         |         |        | -                    |
|                 |          | available       |         |        |                      |
| phosphoric acid |          | No data         |         |        | -                    |
|                 |          | available       |         |        |                      |

Impact on sewage plants - toxicity to bacteria

| Ingredient(s)   | Endpoint | Value<br>(mg/l)      | Inoculum         | Method           | Exposure time |
|-----------------|----------|----------------------|------------------|------------------|---------------|
| nitric acid     |          | No data<br>available |                  |                  |               |
| phosphoric acid | EC 50    | 270                  | Activated sludge | Method not given |               |

# Aquatic long-term toxicity Aquatic long-term toxicity - fish

| Ingredient(s)   | Endpoint | Value<br>(mg/l) | Species      | Method     | Exposure time | Effects observed |
|-----------------|----------|-----------------|--------------|------------|---------------|------------------|
| nitric acid     | LD 50    | 8226            | Oncorhynchus | Method not | 96 hour(s)    |                  |
|                 |          |                 | mykiss       | given      |               |                  |
| phosphoric acid |          | No data         |              | •          |               |                  |
|                 |          | available       |              |            |               |                  |

Aquatic long-term toxicity - crustacea

| Ingredient(s)   | Endpoint | Value<br>(mg/l)      | Species | Method | Exposure time | Effects observed |
|-----------------|----------|----------------------|---------|--------|---------------|------------------|
| nitric acid     |          | No data<br>available |         |        |               |                  |
| phosphoric acid |          | No data<br>available |         |        |               |                  |

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

|   | Ingredient(s)   | Endpoint | Value<br>(mg/kg dw<br>sediment) | Species | Method | Exposure time (days) | Effects observed |
|---|-----------------|----------|---------------------------------|---------|--------|----------------------|------------------|
|   | nitric acid     |          | No data                         |         |        | -                    |                  |
|   |                 |          | available                       |         |        |                      |                  |
| Г | phosphoric acid |          | No data                         |         |        | -                    |                  |
|   |                 |          | available                       |         |        |                      |                  |

Terrestrial toxicity

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

| errestrial toxicity - soil invertebrates, including earthworms, if available. |          |                             |         |        |                         |                  |  |
|---|----------|-----------------------------|---------|--------|-------------------------|------------------|--|
| Ingredient(s)   | Endpoint | Value<br>(mg/kg dw<br>soil) | Species | Method | Exposure<br>time (days) | Effects observed |  |
| nitric acid   |          | No data<br>available        |         |        | -                       |                  |  |
| phosphoric acid   |          | No data<br>available        |         |        | -                       |                  |  |

Terrestrial toxicity - plants, if available:

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

|                 | available |  |   |  |
|-----------------|-----------|--|---|--|
| phosphoric acid | No data   |  | - |  |
|                 | available |  |   |  |

Terrestrial toxicity - birds, if available:

| Ingredient(s)   | Endpoint | Value                | Species | Method | Exposure time (days) | Effects observed |
|-----------------|----------|----------------------|---------|--------|----------------------|------------------|
| nitric acid     |          | No data<br>available |         |        | -                    |                  |
| phosphoric acid |          | No data<br>available |         |        | -                    |                  |

Terrestrial toxicity - beneficial insects, if available:

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

Terrestrial toxicity - soil bacteria, if available:

| Ingredient(s)   | Endpoint | Value<br>(mg/kg dw<br>soil) | Species | Method | Exposure time (days) | Effects observed |
|-----------------|----------|-----------------------------|---------|--------|----------------------|------------------|
| nitric 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                           |
|-----------------|----------|-------------------|-------|--------|--------------------------------------|
| nitric acid     |          |                   |       |        | Not applicable (inorganic substance) |
| phosphoric acid |          |                   |       |        | Not applicable (inorganic substance) |

Ready biodegradability - anaerobic and marine conditions, if available:

Degradation in relevant environmental compartments, if available:

#### 12.3 Bioaccumulative potential

| artition coefficient n-octanol/water (log i | 1011)             |                  |                             |        |
|---|-------------------|------------------|-----------------------------|--------|
| Ingredient(s) Value                         |                   | Method           | Evaluation                  | Remark |
| nitric acid -2.3                            |                   | Method not given | Not relevant, does not      |        |
|   |                   |                  | bioaccumulate               |        |
| phosphoric acid                             | No data available |                  | No bioaccumulation expected |        |

Bioconcentration factor (BCF)

| Ingredient(s)   | Value             | Species | Method | Evaluation                  | Remark |
|-----------------|-------------------|---------|--------|-----------------------------|--------|
| nitric acid     | No data available |         |        |                             |        |
| phosphoric acid | No data available |         |        | No bioaccumulation expected |        |

#### 12.4 Mobility in soil

| Ingredient(s)   | Adsorption<br>coefficient<br>Log Koc | Desorption<br>coefficient<br>Log Koc(des) | Method | Soil/sediment<br>type | Evaluation                                       |
|-----------------|--------------------------------------|---|--------|-----------------------|--|
| nitric acid     | No data available                    |   |        |                       | Mobile in aqueous environment                    |
| phosphoric acid | No data available                    |   |        |                       | Potential for mobility in soil, soluble in water |

#### 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**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.

Fundamental is suitable for energy recovery of recycling in line with local registation

European Waste Catalogue: 20 01 14\* - acids.

**Empty packaging** 

**Recommendation:** Dispose of observing national or local regulations.

Suitable cleaning agents: Water, if necessary with cleaning agent.

#### SECTION 14: Transport information



Land transport (ADR/RID), Sea transport (IMDG), Air transport (ICAO-TI / IATA-DGR)

14.1 UN number: 2031

14.2 UN proper shipping name:

Nitric acid, solution

14.3 Transport hazard class(es):

Class: 8
Label(s): 8
14.4 Packing group: II
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 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

#### EU regulations:

- Regulation (EC) No. 1907/2006 REACH
- Regulation (EC) No 1272/2008 CLP

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

Ingredients according to EC Detergents Regulation 648/2004

#### 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:** MSDS1994 **Version:** 06.1 **Revision:** 2018-01-25

Reason for revision:

2, 3, 16

#### 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 H and EUH phrases mentioned in section 3: • H272 - May intensify fire; oxidiser. • H290 - May be corrosive to metals.

- H303 May be harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- EUH071 Corrosive to the respiratory tract.

#### 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
   LD50 Lethal Dose, 50% / Median Lethal dose
- LC50 Lethal Concentration, 50% / Median Lethal Concentration
   EC50 effective concentration, 50%
- NOEL No observed effect level
- NOAEL No observed adverse effect level
   OECD Organization for Economic Cooperation and Development

**End of Safety Data Sheet**