

## Horizon Bio

Revision: 2024-11-11

Version: 09.6

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

#### 1.1 Product identifier

**Trade name:** Horizon Bio

UFI: 9C60-70NE-800H-NNKJ

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

**Product use:** Laundry detergent.  
For professional use only.

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

#### SWED - Sector-specific worker exposure description :

AISE\_SWED\_PW\_8a\_2  
AISE\_SWED\_PW\_1\_1  
AISE\_SWED\_PW\_4\_1

#### 1.3 Details of the supplier of the safety data sheet

Diversey Europe Operations BV, De Corridor 4, 3621ZB Breukelen [Maarssebroeksedijk 2, 3542DN Utrecht], The Netherlands

Tel: 01 8081808 (9am - 5pm Mon-Fri)

Email: dublin.orders@solenis.com

#### 1.4 Emergency telephone number

Seek medical advice (show the label or safety data sheet where possible).

National Poisons Information Centre

Tel: 01 809 2166. (8.00 a.m. to 10.00 p.m. 7 days a week)

Tel: 01 809 2566 (health care professionals).

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Eye irritation, Category 2 (H319)

#### 2.2 Label elements



**Signal word:** Warning.

#### Hazard statements:

H319 - Causes serious eye irritation.

#### 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 |
|---------------------|-----------|------------|----------------------|--|-------|----------------|
| sodium carbonate    | 207-838-8 | 497-19-8   | 01-211948549<br>8-19 | Eye irritation, Category 2 (H319)  |       | 10-20          |
| sodium percarbonate | 239-707-6 | 15630-89-4 | 01-211945726<br>8-30 | Oxidising solids, Category 3 (H272)<br>Acute toxicity - Oral, Category 4 (H302)<br>Serious eye damage, Category 1 (H318) |       | 3-10           |
| disodium disilicate | 215-687-4 | 1344-09-8  | 01-211944872         | Specific target organ toxicity - Single exposure,  |       | 3-10           |

## Horizon Bio

|                               |           |            |                      |  |      |
|-------------------------------|-----------|------------|----------------------|--|------|
|                               |           |            | 5-31                 | Category 3 (H335)<br>Skin irritation, Category 2 (H315)<br>Serious eye damage, Category 1 (H318)   |      |
| sodium alkylbenzenesulphonate | 270-115-0 | 68411-30-3 | 01-211948942<br>8-22 | Acute toxicity - Oral, Category 4 (H302)<br>Skin irritation, Category 2 (H315)<br>Serious eye damage, Category 1 (H318)<br>Chronic aquatic toxicity, Category 3 (H412) | 3-10 |
| alkyl alcohol ethoxylate      | [4]       | 69011-36-5 | [4]                  | Acute toxicity - Oral, Category 4 (H302)<br>Serious eye damage, Category 1 (H318)  | 1-3  |

**Specific concentration limits**

sodium percarbonate:

- Serious eye damage, Category 1 (H318) >= 25% > Eye irritation, Category 2 (H319) >= 7.5%

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

ATE, if available, are listed in section 11.

[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**

|  |  |
|--|--|
| <b>Inhalation:</b>                     | Get medical attention or advice if you feel unwell.  |
| <b>Skin contact:</b>                   | Wash skin with plenty of lukewarm, gently flowing water. If skin irritation occurs: Get medical advice or attention.   |
| <b>Eye contact:</b>                    | 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. If irritation occurs and persists, get medical attention. |
| <b>Ingestion:</b>                      | Rinse mouth. Immediately drink 1 glass of water. Never give anything by mouth to an unconscious person. Get medical attention or advice if you feel unwell.  |
| <b>Self-protection of first aider:</b> | Consider personal protective equipment as indicated in subsection 8.2.   |

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

|                      |   |
|----------------------|---|
| <b>Inhalation:</b>   | No known effects or symptoms in normal use. |
| <b>Skin contact:</b> | No known effects or symptoms in normal use. |
| <b>Eye contact:</b>  | Causes severe irritation.                   |
| <b>Ingestion:</b>    | No known effects or symptoms in normal use. |

**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 eye/face protection.

**6.2 Environmental precautions**

Do not allow to enter drainage system, surface or ground water.

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

Collect mechanically. Do not place spilled materials back into the original container. Collect in closed and suitable containers for disposal.

**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.

**Advice 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 Diversey. Wash hands before breaks and at the end of workday. Avoid contact with eyes. Use only with adequate ventilation. See chapter 8.2, Exposure controls / Personal protection.

**7.2 Conditions for safe storage, including any incompatibilities**

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

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/DMEL oral exposure - Consumer (mg/kg bw)

| Ingredient(s)                 | Short term - Local effects | Short term - Systemic effects | Long term - Local effects | Long term - Systemic effects |
|-------------------------------|----------------------------|-------------------------------|---------------------------|------------------------------|
| sodium carbonate              | -                          | -                             | -                         | -                            |
| sodium percarbonate           | -                          | -                             | -                         | -                            |
| disodium disilicate           | -                          | -                             | -                         | 0.8                          |
| sodium alkylbenzenesulphonate | -                          | -                             | -                         | 0.425                        |
| alkyl alcohol ethoxylate      | -                          | -                             | -                         | -                            |

DNEL/DMEL 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) |
|-------------------------------|------------------------------|--|------------------------------|---|
| sodium carbonate              | -                            | -  | No data available            | -                                       |
| sodium percarbonate           | 12.8 mg/cm <sup>2</sup> skin | -  | 12.8 mg/cm <sup>2</sup> skin | -                                       |
| disodium disilicate           | No data available            | -  | No data available            | 1.59                                    |
| sodium alkylbenzenesulphonate | -                            | -  | -                            | 119                                     |
| alkyl alcohol ethoxylate      | -                            | -  | -                            | -                                       |

DNEL/DMEL 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) |
|-------------------------------|-----------------------------|--|-----------------------------|---|
| sodium carbonate              | No data available           | -  | No data available           | -                                       |
| sodium percarbonate           | 6.4 mg/cm <sup>2</sup> skin | -  | 6.4 mg/cm <sup>2</sup> skin | -                                       |
| disodium disilicate           | No data available           | -  | No data available           | 0.8                                     |
| sodium alkylbenzenesulphonate | -                           | -  | -                           | 42.5                                    |
| alkyl alcohol ethoxylate      | -                           | -  | -                           | -                                       |

DNEL/DMEL inhalatory exposure - Worker (mg/m<sup>3</sup>)

| Ingredient(s)                 | Short term - Local effects | Short term - Systemic effects | Long term - Local effects | Long term - Systemic effects |
|-------------------------------|----------------------------|-------------------------------|---------------------------|------------------------------|
| sodium carbonate              | -                          | -                             | 10                        | -                            |
| sodium percarbonate           | -                          | -                             | 5                         | -                            |
| disodium disilicate           | -                          | -                             | -                         | 5.61                         |
| sodium alkylbenzenesulphonate | -                          | -                             | -                         | 6                            |
| alkyl alcohol ethoxylate      | -                          | -                             | -                         | -                            |

DNEL/DMEL inhalatory exposure - Consumer (mg/m<sup>3</sup>)

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

## Horizon Bio

|                               | effects | effects | effects | effects |
|-------------------------------|---------|---------|---------|---------|
| sodium carbonate              | 10      | -       | -       | -       |
| sodium percarbonate           | -       | -       | -       | -       |
| disodium disilicate           | -       | -       | -       | 1.38    |
| sodium alkylbenzenesulphonate | -       | -       | -       | 1.5     |
| alkyl alcohol ethoxylate      | -       | -       | -       | -       |

**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) |
|-------------------------------|-----------------------------|------------------------------|---------------------|-------------------------------|
| sodium carbonate              | -                           | -                            | -                   | -                             |
| sodium percarbonate           | 0.035                       | 0.035                        | 0.035               | 16.24                         |
| disodium disilicate           | 7.5                         | 1                            | 7.5                 | 348                           |
| sodium alkylbenzenesulphonate | 0.268                       | 0.0268                       | 0.0167              | 3.43                          |
| alkyl alcohol ethoxylate      | -                           | -                            | -                   | -                             |

Environmental exposure - PNEC, continued

| Ingredient(s)                 | Sediment, freshwater (mg/kg) | Sediment, marine (mg/kg) | Soil (mg/kg) | Air (mg/m <sup>3</sup> ) |
|-------------------------------|------------------------------|--------------------------|--------------|--------------------------|
| sodium carbonate              | -                            | -                        | -            | -                        |
| sodium percarbonate           | -                            | -                        | -            | -                        |
| disodium disilicate           | -                            | -                        | -            | -                        |
| sodium alkylbenzenesulphonate | 8.1                          | 6.8                      | 35           | -                        |
| alkyl alcohol ethoxylate      | -                            | -                        | -            | -                        |

**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:

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

**REACH use scenarios considered for the undiluted product:**

|                              | SWED - Sector-specific worker exposure description | LCS | PROC    | Duration (min) | ERC   |
|------------------------------|--|-----|---------|----------------|-------|
| Manual transfer and dilution | AISE_SWED_PW_8a_2                                  | PW  | PROC 8a | 60             | ERC8a |

**Personal protective equipment**

**Eye / face protection:** No special requirements under normal use conditions.  
**Hand protection:** No special requirements under normal use conditions.  
**Body protection:** No special requirements under normal use conditions.  
**Respiratory protection:** If exposure to dust cannot be avoided use: full-face mask (EN 136) with filter type HEPA (N100, Class H14) (EN 1822) or self-contained or compressed air breathing apparatus (EN 137 / EN 138). Consider specific local use conditions. In consultation with the supplier of respiratory protection equipment a different type providing similar protection may be chosen.

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

Recommended safety measures for handling the diluted product:

**Recommended maximum concentration (% w/w):** 1.19

**Appropriate engineering controls:** No special requirements under normal use conditions.  
**Appropriate organisational controls:** No special requirements under normal use conditions.

**REACH use scenarios considered for the diluted product:**

|  | SWED             | LCS | PROC   | Duration (min) | ERC   |
|--|------------------|-----|--------|----------------|-------|
| Automatic application in a dedicated closed system | AISE_SWED_PW_1_1 | PW  | PROC 1 | 480            | ERC8a |
| Automatic application in a dedicated system        | AISE_SWED_PW_4_1 | PW  | PROC 4 | 480            | ERC8a |

**Personal protective equipment**

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

## Horizon Bio

**Hand protection:** No special requirements under normal use conditions.  
**Body protection:** No special requirements under normal use conditions.  
**Respiratory protection:** No special requirements under normal use conditions.

**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                                |
|---|--|
| <b>Physical state:</b> Solid  |  |
| <b>Appearance:</b> Powder   |  |
| <b>Colour:</b> Speckles , from White to Blue                        |  |
| <b>Odour:</b> Product specific                                      |  |
| <b>Odour threshold:</b> Not applicable                              |  |
| <b>Melting point/freezing point (°C):</b> Not determined            | Not relevant to classification of this product |
| <b>Initial boiling point and boiling range (°C):</b> Not determined | Not applicable to solids or gases              |

Substance data, boiling point

| Ingredient(s)                 | Value (°C)                        | Method           | Atmospheric pressure (hPa) |
|-------------------------------|-----------------------------------|------------------|----------------------------|
| sodium carbonate              | 1600                              | Method not given | 1013                       |
| sodium percarbonate           | Product decomposes before boiling |                  |                            |
| disodium disilicate           | > 100                             | Method not given |                            |
| sodium alkylbenzenesulphonate | No data available                 |                  |                            |
| alkyl alcohol ethoxylate      | > 200                             | Method not given |                            |

|  | Method / remark |
|--|-----------------|
| <b>Flammability (solid, gas):</b> Not determined   |                 |
| <b>Flammability (liquid):</b> Not applicable.  |                 |
| <b>Flash point (°C):</b> Not applicable.   |                 |
| <b>Sustained combustion:</b> Not applicable.<br>( UN Manual of Tests and Criteria, section 32, L.2 ) |                 |
| <b>Lower and upper explosion limit/flammability limit (%):</b> Not determined                        |                 |

Substance data, flammability or explosive limits, if available:

|   | Method / remark                   |
|---|-----------------------------------|
| <b>Autoignition temperature:</b> Not determined               |                                   |
| <b>Decomposition temperature:</b> Not applicable.             |                                   |
| <b>pH:</b> Not applicable                                     |                                   |
| <b>Dilution pH:</b> ≈ 11 (1.2 %)                              | ISO 4316                          |
| <b>Kinematic viscosity:</b> Not applicable to solids or gases | Not applicable to solids or gases |
| <b>Solubility in / Miscibility with water:</b> Soluble        |                                   |

Substance data, solubility in water

| Ingredient(s)                 | Value (g/l) | Method           | Temperature (°C) |
|-------------------------------|-------------|------------------|------------------|
| sodium carbonate              | 210-215     | Method not given | 20               |
| sodium percarbonate           | 140         | Method not given | 20               |
| disodium disilicate           | Soluble     | Method not given | 20               |
| sodium alkylbenzenesulphonate | > 250       |                  |                  |
| alkyl alcohol ethoxylate      | Soluble     | Method not given | 20               |

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

|  | Method / remark    |
|--|--------------------|
| <b>Vapour pressure:</b> Not determined | See substance data |

Substance data, vapour pressure

| Ingredient(s)                 | Value (Pa)        | Method           | Temperature (°C) |
|-------------------------------|-------------------|------------------|------------------|
| sodium carbonate              | Negligible        |                  |                  |
| sodium percarbonate           | Negligible        |                  |                  |
| disodium disilicate           | No data available |                  |                  |
| sodium alkylbenzenesulphonate | No data available |                  |                  |
| alkyl alcohol ethoxylate      | Negligible        | Method not given | 20-25            |

**Relative density:**  $\approx 0.85$  (20 °C)  
**Relative vapour density:** No data available.  
**Particle characteristics:** Not determined.

**Method / remark**  
 OECD 109 (EU A.3)  
 Not applicable to solids  
 Not relevant to classification of this product.

## 9.2 Other information

### 9.2.1 Information with regard to physical hazard classes

**Explosive properties:** Not explosive.  
**Oxidising properties:** Not oxidising.  
**Corrosion to metals:** Not determined

Not applicable to solids or gases

### 9.2.2 Other safety characteristics

No other relevant information 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

None known under normal use conditions.

### 10.6 Hazardous decomposition products

None known under normal storage and use conditions.

## SECTION 11: Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Mixture data: .

#### Relevant calculated ATE(s):

ATE - Oral (mg/kg): >2000

#### Eye irritation and corrosivity

**Result:** Eye irritant 2      **Method:** Weight of evidence

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) | ATE Oral (mg/kg) |
|-------------------------------|------------------|---------------|---------|------------------------|-------------------|------------------|
| sodium carbonate              | LD <sub>50</sub> | 2800          | Rat     | OECD 401 (EU B.1)      |                   | 2800             |
| sodium percarbonate           | LD <sub>50</sub> | 1034          | Rat     | Method not given       |                   | 1034             |
| disodium disilicate           | LD <sub>50</sub> | 3400          | Rat     | Method not given       |                   | Not established  |
| sodium alkylbenzenesulphonate | LD <sub>50</sub> | 1080          | Rat     | OECD 401 (EU B.1)      |                   | 1080             |
| alkyl alcohol ethoxylate      | LD <sub>50</sub> | > 300-2000    | Rat     | OECD 423 (EU B.1 tris) |                   | Not established  |

Acute dermal toxicity

| Ingredient(s)                 | Endpoint         | Value (mg/kg) | Species | Method            | Exposure time (h) | ATE Dermal (mg/kg) |
|-------------------------------|------------------|---------------|---------|-------------------|-------------------|--------------------|
| sodium carbonate              | LD <sub>50</sub> | > 2000        | Rabbit  | Method not given  |                   | Not established    |
| sodium percarbonate           | LD <sub>50</sub> | > 2000        | Rabbit  | OECD 402 (EU B.3) |                   | Not established    |
| disodium disilicate           | LD <sub>50</sub> | > 5000        | Rat     | Method not given  |                   | Not established    |
| sodium alkylbenzenesulphonate | LD <sub>50</sub> | > 2000        | Rat     | OECD 402 (EU B.3) |                   | Not established    |
| alkyl alcohol ethoxylate      | LD <sub>50</sub> | > 2000        | Rabbit  | Method not given  |                   | Not established    |

## Acute inhalative toxicity

| Ingredient(s)                 | Endpoint         | Value (mg/l)                 | Species | Method             | Exposure time (h) |
|-------------------------------|------------------|------------------------------|---------|--------------------|-------------------|
| sodium carbonate              | LC <sub>50</sub> | > 2.3 (dust)                 |         | Weight of evidence | 2                 |
| sodium percarbonate           |                  | No data available            |         |                    |                   |
| disodium disilicate           | LC <sub>50</sub> | > 2.06 No mortality observed | Rat     | Non guideline test |                   |
| sodium alkylbenzenesulphonate |                  | No data available            |         |                    |                   |
| alkyl alcohol ethoxylate      |                  | No data available            |         |                    |                   |

## Acute inhalative toxicity, continued

| Ingredient(s)                 | ATE - inhalation, dust (mg/l) | ATE - inhalation, mist (mg/l) | ATE - inhalation, vapour (mg/l) | ATE - inhalation, gas (mg/l) |
|-------------------------------|-------------------------------|-------------------------------|---------------------------------|------------------------------|
| sodium carbonate              | Not established               | Not established               | Not established                 | Not established              |
| sodium percarbonate           | Not established               | Not established               | Not established                 | Not established              |
| disodium disilicate           | Not established               | Not established               | Not established                 | Not established              |
| sodium alkylbenzenesulphonate | Not established               | Not established               | Not established                 | Not established              |
| alkyl alcohol ethoxylate      | Not established               | Not established               | Not established                 | Not established              |

## Irritation and corrosivity

## Skin irritation and corrosivity

| Ingredient(s)                 | Result       | Species | Method            | Exposure time |
|-------------------------------|--------------|---------|-------------------|---------------|
| sodium carbonate              | Not irritant | Rabbit  | OECD 404 (EU B.4) |               |
| sodium percarbonate           | Not irritant | Rabbit  | Method not given  |               |
| disodium disilicate           | Irritant     |         | Method not given  |               |
| sodium alkylbenzenesulphonate | Irritant     | Rabbit  | OECD 404 (EU B.4) |               |
| alkyl alcohol ethoxylate      | Not irritant | Rabbit  | OECD 404 (EU B.4) |               |

## Eye irritation and corrosivity

| Ingredient(s)                 | Result        | Species | Method            | Exposure time |
|-------------------------------|---------------|---------|-------------------|---------------|
| sodium carbonate              | Irritant      | Rabbit  | OECD 405 (EU B.5) |               |
| sodium percarbonate           | Severe damage | Rabbit  | EPA OPP 81-4      |               |
| disodium disilicate           | Severe damage |         | Method not given  |               |
| sodium alkylbenzenesulphonate | Corrosive     | Rabbit  | OECD 405 (EU B.5) |               |
| alkyl alcohol ethoxylate      | Severe damage | Rabbit  | Method not given  |               |

## Respiratory tract irritation and corrosivity

| Ingredient(s)                 | Result                              | Species | Method           | Exposure time |
|-------------------------------|-------------------------------------|---------|------------------|---------------|
| sodium carbonate              | No data available                   |         |                  |               |
| sodium percarbonate           | Irritating to respiratory tract     | Mouse   | Method not given |               |
| disodium disilicate           | Irritating to respiratory tract     |         | Method not given |               |
| sodium alkylbenzenesulphonate | Not irritating to respiratory tract |         |                  |               |
| alkyl alcohol ethoxylate      | No data available                   |         |                  |               |

## Sensitisation

## Sensitisation by skin contact

| Ingredient(s)                 | Result          | Species    | Method                           | Exposure time (h) |
|-------------------------------|-----------------|------------|----------------------------------|-------------------|
| sodium carbonate              | Not sensitising |            | Method not given                 |                   |
| sodium percarbonate           | Not sensitising | Guinea pig | OECD 406 (EU B.6) / Buehler test |                   |
| disodium disilicate           | Not sensitising |            | Method not given                 |                   |
| sodium alkylbenzenesulphonate | Not sensitising | Guinea pig | OECD 406 (EU B.6) / GPMT         |                   |
| alkyl alcohol ethoxylate      | Not sensitising | Guinea pig | Method not given                 |                   |

## Sensitisation by inhalation

| Ingredient(s)                 | Result            | Species | Method | Exposure time |
|-------------------------------|-------------------|---------|--------|---------------|
| sodium carbonate              | No data available |         |        |               |
| sodium percarbonate           | No data available |         |        |               |
| disodium disilicate           | No data available |         |        |               |
| sodium alkylbenzenesulphonate | 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) |
|-------------------------------|---|---|--|------------------|
| sodium carbonate              | No data available                                   |   | No data available                                  |                  |
| sodium percarbonate           | No data available                                   |   | No data available                                  |                  |
| disodium disilicate           | No evidence for mutagenicity, negative test results |   | No data available                                  |                  |
| sodium alkylbenzenesulphonate | No evidence for mutagenicity, negative test results | OECD 471 (EU B.12/13) OECD 476 OECD 473 | No data available                                  |                  |
| alkyl alcohol ethoxylate      | No evidence of genotoxicity, negative test results  | Method not given                        | No evidence of genotoxicity, negative test results | Method not given |

## Carcinogenicity

| Ingredient(s)                 | Effect   |
|-------------------------------|--|
| sodium carbonate              | No evidence for carcinogenicity, weight-of-evidence    |
| sodium percarbonate           | No data available                                      |
| disodium disilicate           | No evidence for carcinogenicity, negative test results |
| sodium alkylbenzenesulphonate | No data available                                      |
| alkyl alcohol ethoxylate      | No evidence for carcinogenicity, weight-of-evidence    |

## Toxicity for reproduction

| Ingredient(s)                 | Endpoint | Specific effect     | Value (mg/kg bw/d) | Species | Method             | Exposure time | Remarks and other effects reported               |
|-------------------------------|----------|---------------------|--------------------|---------|--------------------|---------------|--|
| sodium carbonate              |          |                     | No data available  |         |                    |               |  |
| sodium percarbonate           |          |                     | No data available  |         |                    |               |  |
| disodium disilicate           |          |                     | No data available  |         |                    |               | No evidence for reproductive toxicity            |
| sodium alkylbenzenesulphonate | NOAEL    | Teratogenic effects | 300                | Rat     | Non guideline test |               | No known significant effects or critical hazards |
| alkyl alcohol ethoxylate      | NOAEL    | Teratogenic effects | > 50               | Rat     | Not known          |               | No known significant effects or critical hazards |

**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 |
|-------------------------------|----------|--------------------|---------|------------------|----------------------|--------------------------------------|
| sodium carbonate              |          | No data available  |         |                  |                      |                                      |
| sodium percarbonate           |          | No data available  |         |                  |                      |                                      |
| disodium disilicate           | NOAEL    | > 159              | Rat     | Method not given | 180                  | No effects observed                  |
| sodium alkylbenzenesulphonate |          | No data available  |         |                  |                      |                                      |
| 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 |
|-------------------------------|----------|--------------------|---------|--------|----------------------|--------------------------------------|
| sodium carbonate              |          | No data available  |         |        |                      |                                      |
| sodium percarbonate           |          | No data available  |         |        |                      |                                      |
| disodium disilicate           |          | No data available  |         |        |                      |                                      |
| sodium alkylbenzenesulphonate |          | 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 |
|---------------------|----------|--------------------|---------|--------|----------------------|--------------------------------------|
| sodium carbonate    |          | No data available  |         |        |                      |                                      |
| sodium percarbonate |          | No data available  |         |        |                      |                                      |
| disodium disilicate |          | No data available  |         |        |                      |                                      |



## Horizon Bio

|                               |  |                   |  |  |  |  |
|-------------------------------|--|-------------------|--|--|--|--|
| sodium alkylbenzenesulphonate |  | No data available |  |  |  |  |
| alkyl alcohol ethoxylate      |  | No data available |  |  |  |  |

## Chronic toxicity

| Ingredient(s)                 | Exposure route | Endpoint | Value (mg/kg bw/d) | Species | Method           | Exposure time | Specific effects and organs affected | Remark |
|-------------------------------|----------------|----------|--------------------|---------|------------------|---------------|--------------------------------------|--------|
| sodium carbonate              |                |          | No data available  |         |                  |               |                                      |        |
| sodium percarbonate           |                |          | No data available  |         |                  |               |                                      |        |
| disodium disilicate           |                |          | No data available  |         |                  |               |                                      |        |
| sodium alkylbenzenesulphonate |                |          | No data available  |         |                  |               |                                      |        |
| alkyl alcohol ethoxylate      | Oral           | NOAEL    | 50                 | Rat     | Method not given | 24 month(s)   | Effects on organ weights             |        |

## STOT-single exposure

| Ingredient(s)                 | Affected organ(s) |
|-------------------------------|-------------------|
| sodium carbonate              | Not applicable    |
| sodium percarbonate           | No data available |
| disodium disilicate           | No data available |
| sodium alkylbenzenesulphonate | Not applicable    |
| alkyl alcohol ethoxylate      | Not applicable    |

## STOT-repeated exposure

| Ingredient(s)                 | Affected organ(s) |
|-------------------------------|-------------------|
| sodium carbonate              | Not applicable    |
| sodium percarbonate           | No data available |
| disodium disilicate           | Not applicable    |
| sodium alkylbenzenesulphonate | Not applicable    |
| alkyl alcohol ethoxylate      | Not applicable    |

## Aspiration hazard

Substances with an aspiration hazard (H304), if any, are listed in section 3.

## Potential adverse health effects and symptoms

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

## 11.2 Information on other hazards

## 11.2.1 Endocrine disrupting properties

Endocrine disrupting properties - Human data, if available:

## 11.2.2 Other information

No other relevant information available.

## 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) |
|-------------------------------|------------------|--------------|----------------------------|--------------------|-------------------|
| sodium carbonate              | LC <sub>50</sub> | 300          | <i>Lepomis macrochirus</i> | Method not given   | 96                |
| sodium percarbonate           | LC <sub>50</sub> | 70.7         | <i>Pimephales promelas</i> | Method not given   | 96                |
| disodium disilicate           | LC <sub>50</sub> | 1108         | <i>Brachydanio rerio</i>   | Method not given   | 96                |
| sodium alkylbenzenesulphonate | LC <sub>50</sub> | 1.67         | Fish                       | EPA-OPPTS 850.1075 | 96                |
| alkyl alcohol ethoxylate      | LC <sub>50</sub> | > 1 - 10     | <i>Cyprinus carpio</i>     | OECD 203 (EU C.1)  | 96                |

Aquatic short-term toxicity - crustacea

| Ingredient(s)                 | Endpoint         | Value (mg/l) | Species                     | Method            | Exposure time (h) |
|-------------------------------|------------------|--------------|-----------------------------|-------------------|-------------------|
| sodium carbonate              | EC <sub>50</sub> | 200-227      | <i>Ceriodaphnia dubia</i>   | Method not given  | 96                |
| sodium percarbonate           | EC <sub>50</sub> | 4.9          | <i>Daphnia pulex</i>        | Method not given  | 48                |
| disodium disilicate           | EC <sub>50</sub> | 1700         | <i>Daphnia magna Straus</i> | Method not given  | 48                |
| sodium alkylbenzenesulphonate | LC <sub>50</sub> | 2.9          | <i>Daphnia magna Straus</i> | OECD 202 (EU C.2) | 48                |
| alkyl alcohol ethoxylate      | EC <sub>50</sub> | 1 - 10       | <i>Daphnia magna Straus</i> | OECD 202, static  | 48                |

## Aquatic short-term toxicity - algae

| Ingredient(s)                 | Endpoint                       | Value (mg/l) | Species                          | Method             | Exposure time (h) |
|-------------------------------|--------------------------------|--------------|----------------------------------|--------------------|-------------------|
| sodium carbonate              | EC <sub>50</sub>               | > 800        | <i>Selenastrum capricornutum</i> |                    | 72                |
| sodium percarbonate           | EC <sub>50</sub>               | 2.5          | <i>Chlorella vulgaris</i>        | Read across        |                   |
| disodium disilicate           | EC <sub>50</sub>               | 207          | <i>Desmodesmus subspicatus</i>   | Method not given   | 72                |
| sodium alkylbenzenesulphonate | E <sub>b</sub> C <sub>50</sub> | 47.3         | Not specified                    | Non guideline test | 72                |
| alkyl alcohol ethoxylate      | EC <sub>50</sub>               | 1 - 10       | <i>Desmodesmus subspicatus</i>   | OECD 201, static   | 72                |

## Aquatic short-term toxicity - marine species

| Ingredient(s)                 | Endpoint | Value (mg/l)      | Species | Method | Exposure time (days) |
|-------------------------------|----------|-------------------|---------|--------|----------------------|
| sodium carbonate              |          | No data available |         |        |                      |
| sodium percarbonate           |          | No data available |         |        |                      |
| disodium disilicate           |          | No data available |         |        |                      |
| sodium alkylbenzenesulphonate |          | 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 |
|-------------------------------|------------------|-------------------|------------------|--------------------|---------------|
| sodium carbonate              |                  | No data available |                  |                    |               |
| sodium percarbonate           | EC <sub>50</sub> | 466               | Activated sludge | OECD 209           | 0.5 hour(s)   |
| disodium disilicate           |                  | No data available |                  |                    |               |
| sodium alkylbenzenesulphonate | EC <sub>50</sub> | 550               | Bacteria         | OECD 209           | 3 hour(s)     |
| alkyl alcohol ethoxylate      | EC <sub>10</sub> | > 10000           | Activated sludge | DIN 38412 / Part 8 | 17 hour(s)    |

## Aquatic long-term toxicity

## Aquatic long-term toxicity - fish

| Ingredient(s)                 | Endpoint | Value (mg/l)      | Species                    | Method           | Exposure time | Effects observed |
|-------------------------------|----------|-------------------|----------------------------|------------------|---------------|------------------|
| sodium carbonate              |          | No data available |                            |                  |               |                  |
| sodium percarbonate           | NOEC     | 7.4               | <i>Pimephales promelas</i> | Method not given | 96 hour(s)    |                  |
| disodium disilicate           | NOEC     | 348               | <i>Brachydanio rerio</i>   | Method not given | 96 hour(s)    |                  |
| sodium alkylbenzenesulphonate | NOEC     | 0.23              | <i>Oncorhynchus mykiss</i> | Method not given | 72 day(s)     |                  |
| alkyl alcohol ethoxylate      |          | No data available |                            |                  |               |                  |

## Aquatic long-term toxicity - crustacea

| Ingredient(s)                 | Endpoint | Value (mg/l)      | Species              | Method           | Exposure time | Effects observed |
|-------------------------------|----------|-------------------|----------------------|------------------|---------------|------------------|
| sodium carbonate              |          | No data available |                      |                  |               |                  |
| sodium percarbonate           | NOEC     | 2                 | <i>Daphnia pulex</i> | Method not given | 48 hour(s)    |                  |
| disodium disilicate           |          | No data available |                      |                  |               |                  |
| sodium alkylbenzenesulphonate | NOEC     | 1.41              | <i>Daphnia magna</i> | OECD 211         |               |                  |

## Horizon Bio

|                          |  |                   |  |  |  |  |
|--------------------------|--|-------------------|--|--|--|--|
| 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 |
|-------------------------------|----------|---------------------------|---------|--------|----------------------|------------------|
| sodium carbonate              |          | No data available         |         |        |                      |                  |
| sodium percarbonate           |          | No data available         |         |        |                      |                  |
| disodium disilicate           |          | No data available         |         |        |                      |                  |
| sodium alkylbenzenesulphonate |          | 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 |
|--------------------------|----------|-----------------------|-----------------------|--------|----------------------|------------------|
| sodium carbonate         |          | No data available     |                       |        |                      |                  |
| alkyl alcohol ethoxylate | NOEC     | 220                   | <i>Eisenia fetida</i> |        |                      |                  |

Terrestrial toxicity - plants, if available:

| Ingredient(s)            | Endpoint | Value (mg/kg dw soil) | Species                 | Method   | Exposure time (days) | Effects observed |
|--------------------------|----------|-----------------------|-------------------------|----------|----------------------|------------------|
| sodium carbonate         |          | No data available     |                         |          |                      |                  |
| alkyl alcohol ethoxylate | NOEC     | 10                    | <i>Lepidium sativum</i> | OECD 208 |                      |                  |

Terrestrial toxicity - birds, if available:

| Ingredient(s)    | Endpoint | Value             | Species | Method | Exposure time (days) | Effects observed |
|------------------|----------|-------------------|---------|--------|----------------------|------------------|
| sodium carbonate |          | No data available |         |        |                      |                  |

Terrestrial toxicity - beneficial insects, if available:

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

Terrestrial toxicity - soil bacteria, if available:

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

**12.2 Persistence and degradability****Abiotic degradation**

Abiotic degradation - photodegradation in air, if available:

| Ingredient(s)       | Half-life time    | Method           | Evaluation | Remark |
|---------------------|-------------------|------------------|------------|--------|
| sodium carbonate    | No data available |                  |            |        |
| sodium percarbonate | NA                | Method not given |            |        |

Abiotic degradation - hydrolysis, if available:

| Ingredient(s)       | Half-life time in fresh water | Method           | Evaluation           | Remark |
|---------------------|-------------------------------|------------------|----------------------|--------|
| sodium carbonate    | No data available             |                  | Rapidly hydrolysible |        |
| sodium percarbonate | < 1 day(s)                    | Method not given | Hydrolysible         |        |

Abiotic degradation - other processes, if available:

| Ingredient(s)    | Type | Half-life time    | Method | Evaluation | Remark |
|------------------|------|-------------------|--------|------------|--------|
| sodium carbonate |      | No data available |        |            |        |

**Biodegradation**

Ready biodegradability - aerobic conditions

| Ingredient(s)                 | Inoculum                 | Analytical method          | DT <sub>50</sub>    | Method    | Evaluation                           |
|-------------------------------|--------------------------|----------------------------|---------------------|-----------|--------------------------------------|
| sodium carbonate              |                          |                            |                     |           | Not applicable (inorganic substance) |
| sodium percarbonate           |                          |                            |                     |           | Not applicable (inorganic substance) |
| disodium disilicate           |                          |                            |                     |           | Not applicable (inorganic substance) |
| sodium alkylbenzenesulphonate | Activated sludge, aerobe | CO <sub>2</sub> production | 85 % in 28 day(s)   | OECD 301B | Readily biodegradable                |
| alkyl alcohol ethoxylate      | Activated sludge, aerobe | CO <sub>2</sub> production | > 60 % in 28 day(s) | OECD 301B | Readily biodegradable                |

Ready biodegradability - anaerobic and marine conditions, if available:

| Ingredient(s)    | Medium & Type | Analytical method | DT <sub>50</sub> | Method | Evaluation        |
|------------------|---------------|-------------------|------------------|--------|-------------------|
| sodium carbonate |               |                   |                  |        | No data available |

Degradation in relevant environmental compartments, if available:

| Ingredient(s)    | Medium & Type | Analytical method | DT <sub>50</sub> | Method | Evaluation        |
|------------------|---------------|-------------------|------------------|--------|-------------------|
| sodium carbonate |               |                   |                  |        | No data available |

**12.3 Bioaccumulative potential**Partition coefficient n-octanol/water (log K<sub>ow</sub>)

| Ingredient(s)                 | Value             | Method           | Evaluation                        | Remark |
|-------------------------------|-------------------|------------------|-----------------------------------|--------|
| sodium carbonate              | No data available |                  | No bioaccumulation expected       |        |
| sodium percarbonate           | No data available |                  |                                   |        |
| disodium disilicate           | No data available |                  | Low potential for bioaccumulation |        |
| sodium alkylbenzenesulphonate | 3.32              | Method not given | Low potential for bioaccumulation |        |
| alkyl alcohol ethoxylate      | 4.09              | QSAR             | No bioaccumulation expected       |        |

Bioconcentration factor (BCF)

| Ingredient(s)                 | Value             | Species | Method           | Evaluation                         | Remark |
|-------------------------------|-------------------|---------|------------------|------------------------------------|--------|
| sodium carbonate              | No data available |         |                  | No bioaccumulation expected        |        |
| sodium percarbonate           | No data available |         |                  |                                    |        |
| disodium disilicate           | No data available |         |                  |                                    |        |
| sodium alkylbenzenesulphonate | 2-1000            |         | Method not given | High potential for bioaccumulation |        |
| alkyl alcohol ethoxylate      | -                 |         |                  | No bioaccumulation expected        |        |

**12.4 Mobility in soil**

Adsorption/Desorption to soil or sediment

| Ingredient(s)                 | Adsorption coefficient Log K <sub>oc</sub> | Desorption coefficient Log K <sub>oc</sub> (des) | Method | Soil/sediment type | Evaluation                                       |
|-------------------------------|--|--|--------|--------------------|--|
| sodium carbonate              | No data available                          |  |        |                    | Potential for mobility in soil, soluble in water |
| sodium percarbonate           | No data available                          |  |        |                    | High potential for mobility in soil              |
| disodium disilicate           | No data available                          |  |        |                    |  |
| sodium alkylbenzenesulphonate | No data available                          |  |        |                    |  |
| alkyl alcohol ethoxylate      | No data available                          |  |        |                    | Immobile in soil or sediment                     |

**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 Endocrine disrupting properties**

Endocrine disrupting properties - Environmental effects, if available:

**12.7 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.

## Horizon Bio

**European Waste Catalogue:** 20 01 29\* - detergents containing dangerous substances.

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

## SECTION 14: Transport information

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

- 14.1 UN number or ID number: Non-dangerous goods  
 14.2 UN proper shipping name: Non-dangerous goods  
 14.3 Transport hazard class(es): Non-dangerous goods  
 14.4 Packing group: Non-dangerous goods  
 14.5 Environmental hazards: Non-dangerous goods  
 14.6 Special precautions for user: Non-dangerous goods  
 14.7 Maritime transport in bulk according to IMO instruments: Non-dangerous goods

## SECTION 15: Regulatory information

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

#### EU regulations:

- Regulation (EU) 2019/1148 - Explosive Precursors
- Regulation (EC) No. 1907/2006 - REACH
- Regulation (EC) No 1272/2008 - CLP
- Regulation (EC) No. 648/2004 - Detergents regulation
- substances identified as having endocrine disrupting properties in accordance with the criteria set out in Delegated Regulation (EU) 2017/2100 or Regulation (EU) 2018/605
- Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)
- International Maritime Dangerous Goods (IMDG) Code

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

#### Ingredients according to EC Detergents Regulation 648/2004

|  |          |
|--|----------|
| oxygen-based bleaching agents                        | 5 - 15 % |
| anionic surfactants, non-ionic surfactants, zeolites | < 5 %    |
| perfumes , optical brighteners, enzymes              |          |

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.

**Seveso - Classification:** Not classified

### 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:** 659896

**Version:** 09.6

**Revision:** 2024-11-11

#### Reason for revision:

This data sheet contains changes from the previous version in section(s):, 4, 9, 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.

**Abbreviations and acronyms:**

- AISE - The international Association for Soaps, Detergents and Maintenance Products
- ATE - Acute Toxicity Estimate
- DNEL - Derived No Effect Limit
- EC50 - effective concentration, 50%
- ERC - Environmental release categories
- EUH - CLP Specific hazard statement
- LC50 - Lethal Concentration, 50% / Median Lethal Concentration
- LCS - Life cycle stage
- LD50 - Lethal Dose, 50% / Median Lethal dose
- NOAEL - No observed adverse effect level
- NOEL - No observed effect level
- OECD - Organisation for Economic Cooperation and Development
- PBT - Persistent, Bioaccumulative and Toxic
- PNEC - Predicted No Effect Concentration
- PROC - Process categories
- REACH number - REACH registration number, without supplier specific part
- vPvB - very Persistent and very Bioaccumulative
- H272 - May intensify fire; oxidiser.
- H302 - Harmful if swallowed.
- H315 - Causes skin irritation.
- H318 - Causes serious eye damage.
- H319 - Causes serious eye irritation.
- H335 - May cause respiratory irritation.
- H412 - Harmful to aquatic life with long lasting effects.

**End of Safety Data Sheet**