

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

**1.1. Product identifier**

Product form : Mixture  
 Product name : BIOSHIELD LEMON  
 Product code : 205  
 Type of product : Detergent  
 Product group : Mixture

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

**1.2.1. Relevant identified uses**

Industrial/Professional use spec : Industrial  
 For professional use only  
 Use of the substance/mixture : Cleaning/washing agents and additives

**1.2.2. Uses advised against**

No additional information available

**1.3. Details of the supplier of the safety data sheet**

Clover Chemicals Ltd  
 Clover House  
 Macclesfield Road  
 SK23 7DQ Whaley Bridge - United Kingdom  
 T 01663 733114 - F 01663 733115  
[info@cloverchemicals.com](mailto:info@cloverchemicals.com) - [www.cloverchemicals.com](http://www.cloverchemicals.com)

**1.4. Emergency telephone number**

| Country        | Official advisory body   | Address                                  | Emergency number   | Comment |
|----------------|--|--|--|---------|
| Ireland        | National Poisons Information Centre<br>Beaumont Hospital                     | PO Box 1297<br>Beaumont Road<br>9 Dublin | +353 1 809 2566<br>(Healthcare professionals-<br>24/7)<br>+353 1 809 2166 (public,<br>8am - 10pm, 7/7) |         |
| United Kingdom | National Poisons Information Service<br>(Birmingham Centre)<br>City Hospital | Dudley Road<br>B18 7QH Birmingham        | 0344 892 0111  |         |

**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

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

Eye Dam. 1 H318

Full text of hazard classes and H-statements : see section 16

**Adverse physicochemical, human health and environmental effects**

No additional information available

**2.2. Label elements**

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

Hazard pictograms (CLP) :



GHS05

CLP Signal word

: Danger

Hazardous ingredients

: (L+)Lactic acid; Isotridecanol, ethoxylated; Ethoxylated Alcohol

Hazard statements (CLP)

: H318 - Causes serious eye damage.

Precautionary statements (CLP)

: P102 - Keep out of reach of children.  
 P264 - Wash hands thoroughly after handling.  
 P280 - Wear protective gloves, eye protection.  
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P337+P313 - If eye irritation persists: Get medical advice/attention.

EUH-statements

: EUH208 - Contains AMYL CINNAMIC ALDEHYDE. May produce an allergic reaction.

**2.3. Other hazards**

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

# BIOSHIELD LEMON

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

| Name                       | Product identifier  | %       | Classification according to Regulation (EC) No. 1272/2008 [CLP]      |
|----------------------------|---|---------|--|
| Isotridecanol, ethoxylated | (CAS-no) 69011-36-5<br>(Einecs nr) 931-138-8<br>(EG annex nr) /<br>(REACH-no) Exempted  | 5 – 10  | Acute Tox. 4 (Oral), H302<br>Eye Dam. 1, H318                        |
| (L+)Lactic acid            | (CAS-no) 79-33-4<br>(Einecs nr) 201-196-2<br>(REACH-no) 01-2119474164-39  | 1 – 3   | Skin Irrit. 2, H315<br>Eye Dam. 1, H318                              |
| Ethoxylated Alcohol        | (CAS-no) 157627-86-6/160901-19-9/68551-12-2/68439-50-9<br>(Einecs nr) 500-337-8/500-457-0/500-221-7/500-213-3<br>(EG annex nr) /<br>(REACH-no) Exempted | 1 – 3   | Eye Dam. 1, H318<br>Aquatic Acute 1, H400<br>Aquatic Chronic 3, H412 |
| AMYL CINNAMIC ALDEHYDE     | (CAS-no) 122-40-7<br>(Einecs nr) 204-541-5<br>(REACH-no) 01-2120740487-49   | 0.1 – 1 | Skin Sens. 1B, H317<br>Aquatic Chronic 2, H411                       |

Full text of H-statements: see section 16

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

|                |  |
|----------------|--|
| General advice | : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).                              |
| Inhalation     | : Allow affected person to breathe fresh air. Allow the victim to rest.  |
| Skin contact   | : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.  |
| Eye contact    | : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention. |
| Ingestion      | : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.   |

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

|                          |  |
|--------------------------|--|
| Acute effects skin       | : Slight irritation. Red skin.   |
| Acute effects eyes       | : Causes serious eye damage. redness, itching, tears.                  |
| Acute effects oral route | : May cause irritation to the digestive tract. Abdominal pain, nausea. |

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

No additional information available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire. Water.

#### 5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released. Carbon dioxide. Carbon monoxide.

#### 5.3. Advice for firefighters

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

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

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

# BIOSHIELD LEMON

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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

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

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

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

Hygiene measures : Wash hands, forearms and face thoroughly after handling.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed.

Incompatible products : Strong bases.

Packaging materials : polyethylene.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

#### Appropriate engineering controls:

Ensure that there is a suitable ventilation system.

#### Personal protective equipment:

Avoid all unnecessary exposure.

#### Hand protection:

Wear protective gloves.

#### Eye protection:

Chemical goggles or safety glasses

#### Protective equipment:

Wear suitable protective clothing

#### Personal protective equipment symbol(s):



#### Other information:

Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid

Physical state/form : Liquid.

Colour : Yellow.

Odour : lemon.

Odour threshold : No data available

pH : 2 – 2.8

Relative evaporation rate (butylacetate=1) : No data available

Melting point/range : 0 °C

# BIOSHIELD LEMON

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

|                                  |                       |
|----------------------------------|-----------------------|
| Freezing point                   | : No data available   |
| Boiling point/Boiling range      | : 100 °C              |
| Flash point                      | : No data available   |
| Autoignition temperature         | : No data available   |
| Decomposition temperature        | : No data available   |
| Flammability (solid, gas)        | : Non flammable.      |
| Vapour pressure                  | : No data available   |
| Relative vapour density at 20 °C | : No data available   |
| Relative density                 | : 1.007               |
| Solubility                       | : Soluble in water.   |
| Log Pow                          | : No data available   |
| Viscosity, kinematic             | : No data available   |
| Viscosity, dynamic               | : 30 – 70 cP at 20 °C |
| Explosive properties             | : No data available   |
| Oxidising properties             | : No data available   |
| Explosive limits                 | : No data available   |

### 9.2. Other information

VOC content : 4 g/l

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

Strong bases.

### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

|                             |                  |
|-----------------------------|------------------|
| Acute toxicity (oral)       | : Not classified |
| Acute toxicity (dermal)     | : Not classified |
| Acute toxicity (inhalation) | : Not classified |

#### (L+)Lactic acid (79-33-4)

|                       |                |
|-----------------------|----------------|
| LD50 oral rat         | 3543 mg/kg     |
| LD50 dermal rabbit    | > 2000 mg/kg   |
| LC50 Inhalation - Rat | > 7.94 mg/l/4h |
| ATE CLP (oral)        | 3543 mg/kg     |

#### Isotridecanol, ethoxylated (69011-36-5)

|                    |                      |
|--------------------|----------------------|
| LD50 oral rat      | > 300 (≤ 2000) mg/kg |
| LD50 dermal rabbit | > 2000 mg/kg         |
| ATE CLP (oral)     | 500 mg/kg            |

|                                   |  |
|-----------------------------------|--|
| Skin corrosion/irritation         | : Not classified<br>pH: 2 – 2.8                                    |
| Additional information            | : Based on available data, the classification criteria are not met |
| Serious eye damage/irritation     | : Causes serious eye damage.<br>pH: 2 – 2.8                        |
| Respiratory or skin sensitisation | : Not classified   |
| Additional information            | : Based on available data, the classification criteria are not met |

# BIOSHIELD LEMON

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

|                        |  |
|------------------------|--|
| Germ cell mutagenicity | : Not classified   |
| Additional information | : Based on available data, the classification criteria are not met |
| Carcinogenicity        | : Not classified   |
| Additional information | : Based on available data, the classification criteria are not met |
| Reproductive toxicity  | : Not classified   |
| Additional information | : Based on available data, the classification criteria are not met |
| STOT-single exposure   | : Not classified   |
| Additional information | : Based on available data, the classification criteria are not met |

### Isotridecanol, ethoxylated (69011-36-5)

|                   |                        |
|-------------------|------------------------|
| NOAEL (oral, rat) | > 250 mg/kg bodyweight |
|-------------------|------------------------|

|   |   |
|---|---|
| STOT-repeated exposure                              | : Not classified  |
| Additional information                              | : Based on available data, the classification criteria are not met  |
| Aspiration hazard                                   | : Not classified  |
| Additional information                              | : Based on available data, the classification criteria are not met  |
| Potential adverse human health effects and symptoms | : Based on available data, the classification criteria are not met. |

## SECTION 12: Ecological information

### 12.1. Toxicity

|   |                  |
|---|------------------|
| Hazardous to the aquatic environment, short-term (acute)  | : Not classified |
| Hazardous to the aquatic environment, long-term (chronic) | : Not classified |

### (L+)Lactic acid (79-33-4)

|                |           |
|----------------|-----------|
| LC50 fish 1    | 130 mg/l  |
| EC50 Daphnia 1 | 130 mg/l  |
| ErC50 (algae)  | 2800 mg/l |
| NOEC (acute)   | 1900 mg/l |

### Isotridecanol, ethoxylated (69011-36-5)

|                |             |
|----------------|-------------|
| LC50 fish 1    | > 1 mg/l    |
| EC50 Daphnia 1 | > 1 mg/l    |
| ErC50 (algae)  | 1 – 10 mg/l |

### Ethoxylated Alcohol (157627-86-6/160901-19-9/68551-12-2/68439-50-9)

|                    |  |
|--------------------|--|
| LC50 fish 1        | 0.1 – 1 mg/l (Danio rerio - OESO 203 - ECHA) |
| EC50 Daphnia 1     | 0.1 – 1 mg/l (Daphnia magna - ECHA)          |
| ErC50 (algae)      | 0.1 – 1 mg/l                                 |
| NOEC chronic fish  | > 0.1 mg/l                                   |
| NOEC chronic algae | 0.14 mg/l (CESIO)                            |

### 12.2. Persistence and degradability

#### BIOSHIELD LEMON

|                               |   |
|-------------------------------|---|
| Persistence and degradability | Biodegradable. 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. |
|-------------------------------|---|

# BIOSHIELD LEMON

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

### (L+)Lactic acid (79-33-4)

|                               |                        |
|-------------------------------|------------------------|
| Persistence and degradability | Readily biodegradable. |
|-------------------------------|------------------------|

### Isotridecanol, ethoxylated (69011-36-5)

|                               |   |
|-------------------------------|---|
| Persistence and degradability | Readily biodegradable, according to appropriate OECD test. Not established. |
|-------------------------------|---|

### Ethoxylated Alcohol (157627-86-6/160901-19-9/68551-12-2/68439-50-9)

|                               |                        |
|-------------------------------|------------------------|
| Persistence and degradability | Readily biodegradable. |
|-------------------------------|------------------------|

### 12.3. Bioaccumulative potential

#### BIOSHIELD LEMON

|                           |                     |
|---------------------------|---------------------|
| Bioaccumulative potential | No bioaccumulation. |
|---------------------------|---------------------|

### (L+)Lactic acid (79-33-4)

|         |       |
|---------|-------|
| Log Pow | -0.62 |
|---------|-------|

|                           |                      |
|---------------------------|----------------------|
| Bioaccumulative potential | not bioaccumulative. |
|---------------------------|----------------------|

### Isotridecanol, ethoxylated (69011-36-5)

|                           |                                      |
|---------------------------|--------------------------------------|
| Bioaccumulative potential | No bioaccumulation. Not established. |
|---------------------------|--------------------------------------|

### Ethoxylated Alcohol (157627-86-6/160901-19-9/68551-12-2/68439-50-9)

|                           |                     |
|---------------------------|---------------------|
| Bioaccumulative potential | No bioaccumulation. |
|---------------------------|---------------------|

### AMYL CINNAMIC ALDEHYDE (122-40-7)

|         |     |
|---------|-----|
| Log Pow | 4.7 |
|---------|-----|

### 12.4. Mobility in soil

#### (L+)Lactic acid (79-33-4)

|                |                   |
|----------------|-------------------|
| Ecology - soil | Small adsorption. |
|----------------|-------------------|

### 12.5. Results of PBT and vPvB assessment

#### BIOSHIELD LEMON

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

### Component

|                           |   |
|---------------------------|---|
| (L+)Lactic acid (79-33-4) | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII<br>This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII |
|---------------------------|---|

|   |   |
|---|---|
| Isotridecanol, ethoxylated (69011-36-5) | PBT: not relevant – no registration required<br>vPvB: not relevant – no registration required |
|---|---|

### 12.6. Other adverse effects

Additional information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

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

Waste / unused products : Avoid release to the environment.

## SECTION 14: Transport information

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

| ADR                    | IMDG          | IATA          |
|------------------------|---------------|---------------|
| <b>14.1. UN number</b> |               |               |
| Not regulated          | Not regulated | Not regulated |

# BIOSHIELD LEMON

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

### 14.2. UN proper shipping name

Not regulated

Not regulated

Not regulated

### 14.3. Transport hazard class(es)

Not regulated

Not regulated

Not regulated

### 14.4. Packing group

Not regulated

Not regulated

Not regulated

### 14.5. Environmental hazards

Not regulated

Not regulated

Not regulated

No supplementary information available

### 14.6. Special precautions for user

#### Overland transport

Not regulated

#### Transport by sea

Not regulated

#### Air transport

Not regulated

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

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

VOC content : 4 g/l

Allergenic fragrances > 0,01%:

LINALOOL  
D-LIMONENE  
AMYL CINNAMAL

Detergent Regulation (648/2004/EC): Labelling of contents:

| Component             | %     |
|-----------------------|-------|
| non-ionic surfactants | 5-15% |
| anionic surfactants   | <5%   |
| perfumes              |       |
| LINALOOL              |       |

#### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Data sources

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

Other information

: None.

# BIOSHIELD LEMON

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

### Full text of H- and EUH-statements:

|                     |  |
|---------------------|--|
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4                                  |
| Aquatic Acute 1     | Hazardous to the aquatic environment — Acute Hazard, Category 1    |
| Aquatic Chronic 2   | Hazardous to the aquatic environment — Chronic Hazard, Category 2  |
| Aquatic Chronic 3   | Hazardous to the aquatic environment — Chronic Hazard, Category 3  |
| Eye Dam. 1          | Serious eye damage/eye irritation, Category 1                      |
| Skin Irrit. 2       | Skin corrosion/irritation, Category 2                              |
| Skin Sens. 1B       | Skin sensitisation, category 1B                                    |
| H302                | Harmful if swallowed.  |
| H315                | Causes skin irritation.  |
| H317                | May cause an allergic skin reaction.                               |
| H318                | Causes serious eye damage.   |
| H400                | Very toxic to aquatic life.  |
| H411                | Toxic to aquatic life with long lasting effects.                   |
| H412                | Harmful to aquatic life with long lasting effects.                 |
| EUH208              | Contains AMYL CINNAMIC ALDEHYDE. May produce an allergic reaction. |

### Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

|            |      |                    |
|------------|------|--------------------|
| Eye Dam. 1 | H318 | Calculation method |
|------------|------|--------------------|

SDS EU (REACH Annex II)

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