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

1.1. product identifiers

<table>
<thead>
<tr>
<th>Article No. (manufacturer/supplier)</th>
<th>Identification of the substance or mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>516000</td>
<td>Eco Cleaner</td>
</tr>
</tbody>
</table>

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

Relevant identified uses:

- Cleaning agent.

1.3. Details of the supplier of the safety data sheet

<table>
<thead>
<tr>
<th>supplier (manufacturer/importer/downstream user/distributor)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heinrich König &amp; Co.KG</td>
</tr>
<tr>
<td>An der Rosenhelle 5</td>
</tr>
<tr>
<td>D-61138 Niederdorfelden</td>
</tr>
<tr>
<td>Telephone: +49 6101 5360 0</td>
</tr>
<tr>
<td>Telefax: +49 6101 5360 11</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dept. responsible for information:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory</td>
</tr>
<tr>
<td>Only available during office hours:</td>
</tr>
<tr>
<td>Mon - Thurs 08:00 to 16:00</td>
</tr>
<tr>
<td>Friday 08:00 - 12:30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E-mail (competent person)</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="mailto:SDB@heinrich-koenig.de">SDB@heinrich-koenig.de</a></td>
</tr>
</tbody>
</table>

1.4. Emergency telephone number

<table>
<thead>
<tr>
<th>Emergency telephone number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency CONTACT (24-Hour-Number):GBK</td>
</tr>
<tr>
<td>GmbH +49 (0)6132-84463</td>
</tr>
</tbody>
</table>

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

- Flam. Liq. 3 / H226: Flammable liquids
- Eye Irrit. 2 / H319: Serious eye damage/eye irritation
- Flammable liquid and vapour.
- Causes serious eye irritation.

2.2. Label elements

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

Hazard pictograms

- Warning

Hazard statements

- H226: Flammable liquid and vapour.
- H319: Causes serious eye irritation.

Precautionary statements

- P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233: Keep container tightly closed.
- P264: Wash hands thoroughly after handling.
- P280: Wear protective gloves/protective clothing/eye protection/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. Continue rinsing.
- P337 + P313: If eye irritation persists: Get medical advice/attention.
- P370 + P378: In case of fire: Use foam to extinguish.
- P403 + P235: Store in a well-ventilated place. Keep cool.
- P501.2: Dispose of contents/container via the national/local hazardous waste disposal.

contains: not applicable

Supplemental Hazard information (EU) not applicable

2.3. Other hazards
SECTION 3: Composition / information on ingredients

3.2. Mixtures

Product description / chemical characterization
Description: Cleaner, solvent-based

Hazardous ingredients

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

<table>
<thead>
<tr>
<th>EC No.</th>
<th>CAS No.</th>
<th>INDEX No.</th>
<th>REACH No.</th>
<th>Chemical name classification // Remark</th>
<th>Wt %</th>
</tr>
</thead>
<tbody>
<tr>
<td>200-578-6</td>
<td>01-2119457610-43-xxxx</td>
<td>Ethanol</td>
<td>Flam. Liq. 2 H225</td>
<td>7 &lt; 10</td>
<td></td>
</tr>
<tr>
<td>64-17-5</td>
<td>01-2119492545-29-xxxx</td>
<td>C6 alkyl glucoside</td>
<td>Eye Dam. 1 H318</td>
<td>1 &lt; 2,5</td>
<td></td>
</tr>
<tr>
<td>603-002-00-5</td>
<td>160875-66-1</td>
<td>2-Propylheptanoethoxilate</td>
<td>Eye Dam. 1 H318</td>
<td>1 &lt; 2,5</td>
<td></td>
</tr>
</tbody>
</table>

Additional information
Full text of classification: see section 16

Labelling for contents according to regulation (EC) No. 648/2004:

<table>
<thead>
<tr>
<th>Wt %</th>
<th>Ingredient (Designation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 5 %</td>
<td>nonionic surfactant</td>
</tr>
<tr>
<td>&lt; 5 %</td>
<td>EDTA</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1. Description of first aid measures

General information
In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness give nothing by mouth, place in recovery position and seek medical advice.

In case of inhalation
Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide artificial respiration.

Following skin contact
Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of water and soap. Do not use solvents or thinners.

After eye contact
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice immediately.

After ingestion
If swallowed, rinse mouth with water (only if the person is conscious). Seek medical advice immediately. Keep victim calm. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed
In all cases of doubt, or when symptoms persist, seek medical advice.

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

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: alcohol resistant foam, carbon dioxide, Powder, spray mist, (water)

Extinguishing media which must not be used for safety reasons: strong water jet

5.2. Special hazards arising from the substance or mixture
Dense black smoke occurs during fire. Inhaling hazardous decomposing products can cause serious health damage.

5.3. Advice for firefighters
Provide a conveniently located respiratory protective device. Cool closed containers that are near the source of the fire. Do not allow water used to extinguish fire to enter drains, ground or waterways.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Keep away from sources of ignition. Ventilate affected area. Do not breathe vapours.

6.2. Environmental precautions
Do not allow to enter into surface water or drains. If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with local regulations.

6.3. Methods and material for containment and cleaning up
Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13). Clean using cleansing agents. Do not use solvents.

6.4. Reference to other sections
Observe protective provisions (see chapter 7 and 8).

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Advices on safe handling
Avoid formation of flammable and explosive vapour concentrations in the air and exceeding the exposure limit values. Only use the material in places where open light, fire and other flammable sources can be kept away. Electrical equipment must be protected meeting the accepted standard. Product may become electrostatically charged. Provide earthing of containers, equipment, pumps and ventilation facilities. Anti-static clothing including shoes are recommended. Floors must be electrically conductive. Keep away from heat sources, sparks and open flames. Use only spark proof tools. Avoid contact with skin, eyes and clothes. Do not inhale dusts, particulates and spray mist when using this preparation. Avoid respiration of swarf. When using do not eat, drink or smoke. Personal protection equipment: refer to section 8. Do not empty containers with pressure - no pressure vessel! Always keep in containers that correspond to the material of the original container. Follow the legal protection and safety regulations.

Precautions against fire and explosion:
Vapours are heavier than air. Vapours form explosive mixtures with air.

7.2. Conditions for safe storage, including any incompatibilities
Requirements for storage rooms and vessels
Storage in accordance with the Ordinance on Industrial Safety and Health (BetrSiVO). Keep container tightly closed. Do not empty containers with pressure - no pressure vessel! Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks. Soils have to conform to the "Guidelines for avoidance of ignition hazards due to electrostatic charges (TRBS 2153)".

Hints on joint storage
Keep away from strongly acidic and alkaline materials as well as oxidizers.

Further information on storage conditions
Take care of instructions on label. Store in a well-ventilated and dry room at temperatures between 15 °C and 30 °C. Protect from heat and direct sunlight. Keep container tightly closed. Remove all sources of ignition. Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks.

7.3. Specific end use(s)
Observe technical data sheet. Observe instructions for use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
Occupational exposure limit values:
Ethanol
INDEX No. 603-002-00-5 / EC No. 200-578-6 / CAS No. 64-17-5
TWA: 1920 mg/m3; 1000 ppm

Additional information
TWA : long-term occupational exposure limit value
STEL: short-term occupational exposure limit value
Ceiling: peak limitation

DNEL:
C6 alkyl glucoside
EC No. 259-217-6 / CAS No. 54549-24-5
DNEL long-term dermal (systemic), Workers: 595000 mg/kg
DNEL long-term inhalative (systemic), Workers: 420 mg/m³
DNEL long-term oral (repeated), Consumer: 35,7 mg/kg
DNEL long-term dermal (systemic), Consumer: 357000 mg/kg
DNEL long-term inhalative (systemic), Consumer: 124 mg/m³

Ethanol
INDEX No. 603-002-00-5 / EC No. 200-578-6 / CAS No. 64-17-5
DNEL long-term dermal (systemic), Workers: 343 mg/kg
DNEL acute inhalative (local), Workers: 1900 mg/m³
DNEL long-term inhalative (systemic), Workers: 950 mg/m³
DNEL long-term oral (repeated), Consumer: 87 mg/kg
DNEL acute dermal, short-term (systemic), Consumer: 950 mg/kg
DNEL long-term dermal (systemic), Consumer: 206 mg/kg
DNEL acute inhalative (local), Consumer: 950 mg/m³
DNEL long-term inhalative (systemic), Consumer: 114 mg/m³

PNEC:
C6 alkyl glucoside
EC No. 259-217-6 / CAS No. 54549-24-5
PNEC aquatic, freshwater: 0,176 mg/l
PNEC aquatic, marine water: 0,0176 mg/l
PNEC aquatic, intermittent release: 4,2 mg/l
PNEC sediment, freshwater: 0,722 mg/kg
PNEC sediment, marine water: 0,072 mg/kg
PNEC, Soil: 0,654 mg/kg
PNEC sewage treatment plant (STP): 100 mg/l
PNEC Secondary Poisoning: 111,11 mg/kg

Ethanol
INDEX No. 603-002-00-5 / EC No. 200-578-6 / CAS No. 64-17-5
PNEC aquatic, freshwater: 0,96 mg/l
PNEC aquatic, marine water: 0,79 mg/l
PNEC aquatic, intermittent release: 2,75 mg/l
PNEC sediment, freshwater: 3,6 mg/kg
PNEC sediment, marine water: 2,9 mg/kg
PNEC, Soil: 0,63 mg/kg
PNEC sewage treatment plant (STP): 580 mg/l
PNEC Secondary Poisoning: 0,72 mg/kg

8.2. Exposure controls
Provide good ventilation. This can be achieved with local or room suction. If this should not be sufficient to keep aerosol and solvent vapour concentration below the exposure limit values, a suitable respiratory protection must be used.

Occupational exposure controls

Respiratory protection
If concentration of solvents is beyond the occupational exposure limit values, approved and suitable respiratory protection must be used. Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190). Use only respiratory protection equipment with CE-symbol including four digit test number.

Hand protection
For prolonged or repeated handling the following glove material must be used: NBR (Nitrile rubber)
Thickness of the glove material > 0,4 mm ; Breakthrough time (maximum wearing time) > 480 min.
Observe the instructions and details for use, storage, maintenance and replacement provided by the protective glove manufacturer. Penetration time of glove material depending on intensity and duration of exposure to skin. Recommended glove articles DIN EN 374
Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.

Eye protection
Wear closely fitting protective glasses in case of splashes.
Protective clothing
Wear antistatic clothing of natural fibers (cotton) or heat resistant synthetic fibers.

Protective measures
After contact clean skin thoroughly with water and soap or use appropriate cleanser.

Environmental exposure controls
Do not allow to enter into surface water or drains. See chapter 7. No additional measures necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:
Physical state: liquid
Colour: reddish transparent

Odour:
characteristic
Odour threshold:
not applicable

pH at 20 °C:
N.A.

Melting point/freezing point:
not applicable

Initial boiling point and boiling range:
78 °C
Method: calculated.
Source: Ethanol

Flash point:
45 °C

Evaporation rate:
not applicable

Flammability (solid, gas):
burning time (s):
not applicable

Upper/lower flammability or explosive limits:
Lower explosion limit:
3,47 Vol-%
Method: calculated.

Upper explosion limit:
15 Vol-%
Method: calculated.
Source: Ethanol

Vapour pressure at 20 °C:
8,161 mbar
Method: calculated.

Vapour density:
not applicable

Relative density:
Density at 20 °C:
0,98 g/cm³
Method: calculated.

Solubility(ies):
Water solubility (g/L) at 20 °C:
miscible

Partition coefficient: n-octanol/water:
see section 12

Auto-ignition temperature:
not applicable

Decomposition temperature:
not applicable

Viscosity at 20 °C:
10 s 4 mm
Method: DIN 53211

Explosive properties:
not applicable

Oxidising properties:
not applicable

9.2. Other information

Solid content (%):
3,49 Wt %
solvent content:

Organic solvents:
10 Wt %
Water:
86 Wt %

SECTION 10: Stability and reactivity

10.1. Reactivity
10.2. **Chemical stability**
Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to chapter 7.

10.3. **Possibility of hazardous reactions**
Keep away from strong acids, strong bases and strong oxidizing agents to avoid exothermic reactions.

10.4. **Conditions to avoid**
Hazardous decomposition byproducts may form with exposure to high temperatures.

10.5. **Incompatible materials**

10.6. **Hazardous decomposition products**
Hazardous decomposition byproducts may form with exposure to high temperatures, e.g.: carbon dioxide, carbon monoxide, smoke, nitrogen oxides.

### SECTION 11: Toxicological information

**Classification according to Regulation (EC) No 1272/2008 [CLP]**
No data on preparation itself available.

**11.1. Information on toxicological effects**

**Acute toxicity**
- **C6 alkyl glucoside**
  - oral, LD50, Rat: > 2000 mg/kg
  - dermal, LD50, Rabbit: > 2000 mg/kg  
  - Based on available data the classification criteria are not met.
- **2-Propylheptanolethoxilate**
  - oral, LD50, Rat: > 0 mg/kg  2000 - 5000 mg/kg
  - dermal, LD50, Rabbit: > 0 mg/kg  2000 - 5000 mg/kg
  - Based on available data the classification criteria are not met.
- **Ethanol**
  - oral, LD50, Rat: 10470 mg/kg
  - Method: OECD 401
  - dermal, LD50, Rabbit: > 2000 mg/kg
  - Method: OECD 402
  - inhalative (vapours), LC50, Rat: 51 mg/l (4 h)
  - Method: OECD 403
  - Based on available data the classification criteria are not met.

**skin corrosion/irritation; Serious eye damage/eye irritation**
- **C6 alkyl glucoside**
  - eyes
  - Causes serious eye irritation.
- **2-Propylheptanolethoxilate**
  - eyes
  - Causes serious eye damage.

**Respiratory or skin sensitisation**
Toxicological data are not available.

**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
Toxicological data are not available.

**Specific target organ toxicity**
Toxicological data are not available.

**Aspiration hazard**
Toxicological data are not available.

**Practical experience/human evidence**
Other observations:
Inhaling of solvent components above the MWC-value can lead to health damage, e.g. irritation of the mucous membrane and respiratory organs, as well as damage to the liver, kidneys and the central nerve system. Indications for this are: headache, dizziness, fatigue, amyonsthenia, drowsiness, in serious cases: unconsciousness. Solvents may cause some of the aforementioned effects through skin resorption. Repeated or prolonged contact with the preparation may cause removal of natural
fat from the skin resulting in non-allergic contact dermatitis and/or absorption through skin. Splashing may cause eye irritation and reversible damage.

**Overall Assessment on CMR properties**
The ingredients in this mixture do not meet the criteria for classification as CMR category 1A or 1B according to CLP.

### SECTION 12: Ecological information

**overall evaluation**
Classification according to Regulation (EC) No 1272/2008 [CLP]
There is no information available on the preparation itself.
Do not allow to enter into surface water or drains.

#### 12.1. Toxicity

**C6 alkyl glucoside**
- Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): > 100 mg/l (96 h)
- Daphnia toxicity, EC50, Daphnia magna (Big water flea): > 100 mg/l (48 h)
- Algae toxicity, EC50, Scenedesmus quadricauda: > 100 (72 h)

Based on available data the classification criteria are not met.

**2-Propylheptanolethoxilate**
- Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): > 0 mg/l 10 - 100 mg/l (96 h)
- Daphnia toxicity, EC50, Daphnia magna (Big water flea): > 0 mg/l 10 - 100 mg/l (48 h)
- Algae toxicity, Algae: > 0 mg/l 10 - 100 mg/l (72 h)

Based on available data the classification criteria are not met.

**Ethanol**
- Fish toxicity, LC50, Pimephales promelas (fathead minnow): 15300 mg/l (96 h)
- Daphnia toxicity, EC50, Daphnia magna (Big water flea): 12340 mg/l (48 h)
- Algae toxicity, ErC50, Chlorella vulgaris: 275 mg/l (72 h)
  - Method: OECD 201
- Bacteria toxicity, EC50, Pseudomonas putida: 5800 mg/l (4 h)

Based on available data the classification criteria are not met.

**Long-term Ecotoxicity**

**C6 alkyl glucoside**
- Daphnia toxicity, NOEC, Daphnia pulex (water flea): 1 - 10 mg/l (21 D)

Based on available data the classification criteria are not met.

#### 12.2. Persistence and degradability

**Ethanol**
- Biodegradation, aerobic.: 97 % (28 D)
- Readily biodegradable (according to OECD criteria).

#### 12.3. Bioaccumulative potential

**Ethanol**
- Partition coefficient: n-octanol/water: -0,35

**Bioconcentration factor (BCF)**

**Ethanol**
- Bioconcentration factor (BCF): 0,66
  - No indication of bioaccumulation potential.

#### 12.4. Mobility in soil

Toxicological data are not available.

#### 12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

#### 12.6. Other adverse effects

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

**Appropriate disposal / Product Recommendation**

Do not allow to enter into surface water or drains. This material and its container must be disposed of in a safe way. Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.
SECTION 14: Transport information

14.1. UN number
UN 1993

14.2. UN proper shipping name
Land transport (ADR/RID): Flammable liquid, n.o.s. (ETHANOL SOLUTION)
Sea transport (IMDG): FLAMMABLE LIQUID, N.O.S. (ETHANOL SOLUTION)
Air transport (ICAO-TI / IATA-DGR): Flammable liquid, n.o.s. (ETHANOL SOLUTION)

14.3. Transport hazard class(es)
3

14.4. Packing group
III

14.5. Environmental hazards
Land transport (ADR/RID) not applicable
Marine pollutant not applicable

14.6. Special precautions for user
Transport always in closed, upright and safe containers. Make sure that persons transporting the product know what to do in case of an accident or leakage.
Advises on safe handling: see parts 6 - 8

Further information
Land transport (ADR/RID)
tunnel restriction code D/E
Sea transport (IMDG)
EmS-No. F-E, S-D
Air transport (ICAO-TI / IATA-DGR)

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
EU legislation
Directive 2010/75/EU on industrial emissions
VOC-value (in g/L): 103,247

National regulations
Restrictions of occupation
Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

15.2. Chemical Safety Assessment
For the following substances of this preparation a chemical safety assessment has been carried out:

<table>
<thead>
<tr>
<th>EC No.</th>
<th>Chemical name</th>
<th>REACH No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>200-578-6</td>
<td>Ethanol</td>
<td>01-2119457610-43-xxxx</td>
</tr>
<tr>
<td>64-17-5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SECTION 16: Other information

**Full text of classification in section 3:**

- Flam. Liq. 2 / H225: Flammable liquids
- Eye Dam. 1 / H318: Serious eye damage/eye irritation

**Abbreviations and acronyms**

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

**Further information**

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

The information supplied on this safety data sheet complies with our current level of knowledge as well as with national and EU regulations. Without written approval, the product must not be used for purposes different from those mentioned in chapter 1. It is always the user's duty to take any necessary measures for meeting the requirements laid down by local rules and regulations. The details in this safety data sheet describe the safety requirements of our product and are not to be regarded as guaranteed attributes of the product.