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

1.1 Product identifier

Product name: Alcohol, aldehyde free

Part number: REA1002501

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

No further relevant information available.

Application of the substance / the mixture Reference material for laboratory use only

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:
LGC Limited
Queens Road
Teddington
Middlesex TW11 0LY
UNITED KINGDOM

Further information obtainable from:
Product safety department
eMail : sds-request@lgcgroup.com

1.4 Emergency telephone number: +44 (0) 20 8943 7000 (Monday - Friday : 8am - 5pm)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.

GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS02 GHS07

Signal word Danger

Hazard statements
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
Product name: Alcohol, aldehyde free

- Precautionary statements
  P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P338 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/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.
P501 Dispose of contents/container in accordance with local/ regional/ national/ international regulations.

- 2.3 Other hazards
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

- 3.2 Chemical characterisation: Mixtures
  - Description: Mixture of substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>CAS: 64-17-5</th>
<th>Ethanol</th>
<th>Flam. Liq. 2, H225; Eye Irrit. 2, H319</th>
<th>Eye Irrit. 2, H319</th>
<th>50-100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>EINECS: 200-578-6</td>
<td>RTECS: KQ6300000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

- 4.1 Description of first aid measures
  - General information: Immediately remove any clothing soiled by the product.
  - After inhalation: Supply fresh air; consult doctor in case of complaints.
  - After skin contact: Immediately wash with water and soap and rinse thoroughly.
  - After eye contact:
    - Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
  - After swallowing: Rinse mouth. Do not induce vomiting.
- 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.
- 4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available.

SECTION 5: Firefighting measures

- 5.1 Extinguishing media
  - Suitable extinguishing agents:
    - CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 29.01.2019
Version number 1
Revision: 29.01.2019

Product name: Alcohol, aldehyde free

· 5.2 Special hazards arising from the substance or mixture
  Formation of toxic gases is possible during heating or in case of fire.
· 5.3 Advice for firefighters
  · Protective equipment: Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
· 6.2 Environmental precautions:
  Dilute with plenty of water.
  Do not allow to enter sewers/surface or ground water.
· 6.3 Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Dispose of contaminated material as waste according to item 13.
  Ensure adequate ventilation.
· 6.4 Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling
  Store in cool, dry place in tightly closed receptacles.
· 7.2 Conditions for safe storage, including any incompatibilities
  · Storage:
    · Requirements to be met by storerooms and receptacles:
      Please refer to the manufacturer's certificate for specific storage and transport temperature conditions.
      Store only in the original receptacle unless other advice is given on the CoA.
      Keep container in a well-ventilated place. Keep away from sources of ignition and heat.
    · Information about storage in one common storage facility:
      Store away from foodstuffs.
    · Further information about storage conditions:
      Keep container tightly sealed.
      Store in cool, dry conditions in well sealed receptacles.
  · 7.3 Specific end use(s)

SECTION 8: Exposure controls/personal protection

· Additional information about design of technical facilities: No further data; see item 7.
8.1 Control parameters

- Ingredients with limit values that require monitoring at the workplace:
  - CAS: 64-17-5 Ethanol
    - WEL: Long-term value: 1920 mg/m³, 1000 ppm
- Additional information: Lists used were valid at the time of SDS preparation.

8.2 Exposure controls

- Personal protective equipment:
  - General protective and hygienic measures:
    - Keep away from foodstuffs, beverages and feed.
    - Immediately remove all soiled and contaminated clothing
    - Wash hands before breaks and at the end of work.
    - Avoid contact with the eyes.
    - Avoid contact with the eyes and skin.
  - Respiratory protection: Not required.
  - Protection of hands:
    - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
    - Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
    - The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374

  ![Protective gloves](image)

  - Material of gloves Butyl rubber, BR
  - Penetration time of glove material
    - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
  - Eye protection:

    ![Tightly sealed goggles](image)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- General Information
  - Appearance:
    - Form: Liquid
    - Colour: Colourless
    - Odour: Alcohol-like
### Product name: Alcohol, aldehyde free

<table>
<thead>
<tr>
<th>Property</th>
<th>Value/Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odour threshold</td>
<td>Not determined.</td>
</tr>
<tr>
<td>pH-value at 20 °C</td>
<td>7</td>
</tr>
<tr>
<td>Change in condition</td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>-114.5 °C</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>78 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>13 °C</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>400 °C</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Product is not selfigniting.</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Product is not explosive. However, formation of explosive air/vapour mixtures is possible.</td>
</tr>
<tr>
<td>Explosion limits</td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>3.5 Vol %</td>
</tr>
<tr>
<td>Upper</td>
<td>27.7 Vol %</td>
</tr>
<tr>
<td>Vapour pressure at 20 °C</td>
<td>59 hPa</td>
</tr>
<tr>
<td>Density at 20 °C</td>
<td>0.79 g/cm³</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Solubility in / Miscibility with water at 20 °C:</td>
<td>&gt; 100 g/l</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
</tr>
<tr>
<td>Dynamic</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Kinematic</td>
<td>Not determined.</td>
</tr>
<tr>
<td>9.2 Other information</td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

### SECTION 10: Stability and reactivity

- **10.1 Reactivity**: Stable under normal conditions.
- **10.2 Chemical stability**: Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided**: Formation of toxic gases is possible during heating or in case of fire.
- **10.3 Possibility of hazardous reactions**: May form flammable/explosive vapour-air mixture.
- **10.4 Conditions to avoid Sources of ignition**: Heat.
- **10.5 Incompatible materials**: Strong oxidizing agents.
**SECTION 11: Toxicological information**

- **11.1 Information on toxicological effects**
  - **Acute toxicity**: Based on available data, the classification criteria are not met.
  - **Primary irritant effect**: Skin corrosion/irritation Based on available data, the classification criteria are not met.
  - **Serious eye damage/irritation**: Causes serious eye irritation.
  - **Respiratory or skin sensitisation**: Based on available data, the classification criteria are not met.
  - **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
    - **Germ cell mutagenicity**: Based on available data, the classification criteria are not met.
    - **Carcinogenicity**: Based on available data, the classification criteria are not met.
    - **Reproductive toxicity**: Based on available data, the classification criteria are not met.
    - **STOT-single exposure**: Based on available data, the classification criteria are not met.
    - **STOT-repeated exposure**: Based on available data, the classification criteria are not met.
    - **Aspiration hazard**: Based on available data, the classification criteria are not met.

**SECTION 12: Ecological information**

- **12.1 Toxicity**
  - **Aquatic toxicity**: No further relevant information available.
  - **12.2 Persistence and degradability**: No further relevant information available.
  - **12.3 Bioaccumulative potential**: No further relevant information available.
  - **12.4 Mobility in soil**: No further relevant information available.
  - **Additional ecological information**:
    - **General notes**: Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
      Do not allow undiluted product to reach ground water, water course or sewage system.
  - **12.5 Results of PBT and vPvB assessment**
    - **PBT**: Not applicable.
    - **vPvB**: Not applicable.
  - **12.6 Other adverse effects**: No further relevant information available.

**SECTION 13: Disposal considerations**

- **13.1 Waste treatment methods**
  - **Recommendation**: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
  - **European waste catalogue**
    Waste disposal key numbers from EWC have to be assigned depending on origin and processing.

(Contd. on page 7)
### Product name: Alcohol, aldehyde free

- **Uncleaned packaging:**
  - **Recommendation:** Dispose of in accordance with national regulations.
  - **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

#### SECTION 14: Transport information

<table>
<thead>
<tr>
<th>14.1 UN-Number</th>
<th>UN1170</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ADR, IMDG, IATA</strong></td>
<td>1170 ETHANOL (ETHYL ALCOHOL)</td>
</tr>
<tr>
<td><strong>ADR</strong></td>
<td>ETHANOL (ETHYL ALCOHOL)</td>
</tr>
<tr>
<td><strong>IMDG</strong></td>
<td>ETHANOL</td>
</tr>
<tr>
<td><strong>IATA</strong></td>
<td>ETHANOL</td>
</tr>
</tbody>
</table>

- **14.3 Transport hazard class(es)**
  - **ADR, IMDG, IATA**

  - **Class** 3 Flammable liquids.
  - **Label** 3

- **14.4 Packing group**
  - **ADR, IMDG, IATA** II

- **14.5 Environmental hazards:** Not applicable.

- **14.6 Special precautions for user** Warning: Flammable liquids.
  - **Danger code (Kemler):** 33
  - **EMS Number:** F-E,S-D
  - **Stowage Category** A

- **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.

- **Transport/Additional information:**
  - **Limited quantities (LQ)** 1L
  - **Excepted quantities (EQ)** Code: E2
  - **Transport category** 2
  - **Tunnel restriction code** D/E
  - **UN "Model Regulation":** UN 1170 ETHANOL (ETHYL ALCOHOL), 3, II

(Contd. on page 8)
SECTION 15: Regulatory information

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
  · Directive 2012/18/EU
  · Named dangerous substances - ANNEX I None of the ingredients is listed.
  · Seveso category P5c FLAMMABLE LIQUIDS
  · Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
  · Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
  · REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

The information in this safety data sheet (SDS) has been prepared with due care and is true and accurate to the best of our knowledge. The user must determine the suitability of the information for its particular purpose, ensure compliance with existing laws and regulations, and be aware that other or additional safety or performance considerations may arise when using, handling and/or storing the material. The information in this SDS does not purport to be all inclusive or a guarantee as to the properties of the material supplied, and should be used only as a guide. LGC makes no warranties or representations as to the accuracy and completeness of the information contained herein, shall not be held responsible for the suitability of this information for the user’s intended purposes or the consequences of such use, and shall not be liable for any damage or loss, howsoever arising, direct or otherwise.

· Abbreviations and acronyms:
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  IMDG: International Maritime Code for Dangerous Goods
  IATA: International Air Transport Association
  GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  EINECS: European Inventory of Existing Commercial Chemical Substances
  ELINCS: European List of Notified Chemical Substances
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  Flam. Liq. 2: Flammable liquids – Category 2
  Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

· Sources

· Data compared to the previous version altered. All sections have been updated.