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

1.1. Product identifier
Lc 2/30 Purifying agent

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

Use of the substance/mixture
Cleaning agent

1.3. Details of the supplier of the safety data sheet

Company name: LcM GmbH
Street: Siemensstrasse 26-28
Place: D-32120 Hiddenhausen
Telephone: +49 5223 189 66 30
Telefax: +49 5223 189 66 35
e-mail: info@lcm-gmbh.eu
Internet: http://www.lcm-gmbh.info/

1.4. Emergency telephone number:
+49 5223 189 66 30

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:
Flammable liquid: Flam. Liq. 2
Serious eye damage/eye irritation: Eye Irrit. 2

Hazard Statements:
Highly flammable liquid and vapour.
Causes serious eye irritation.

2.2. Label elements

Regulation (EC) No. 1272/2008

Signal word: Danger

Pictograms:

Hazard statements
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Precautionary statements
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280 Wear protective gloves/protective clothing/eye protection/face 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.
P403+P235 Store in a well-ventilated place. Keep cool.

2.3. Other hazards
No information available.
SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Quantity</th>
<th>EC No</th>
<th>Index No</th>
<th>REACH No</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5</td>
<td>ethanol, ethyl alcohol</td>
<td>50 - &lt; 100 %</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>200-578-6</td>
<td>603-002-00-5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67-64-1</td>
<td>acetone; propan-2-one; propanone</td>
<td>10 - &lt; 25 %</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>200-662-2</td>
<td>606-001-00-8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Full text of H and EUH statements: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

After inhalation
Provide fresh air. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After contact with skin
Wash with plenty of water. Take off contaminated clothing and wash it before reuse.

After contact with eyes
After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion
Rinse mouth immediately and drink plenty of water.

4.2. Most important symptoms and effects, both acute and delayed
No information available.

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

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media
Carbon dioxide (CO2), Foam, Extinguishing powder.

Unsuitable extinguishing media
Water.

5.2. Special hazards arising from the substance or mixture
Highly flammable. Vapours can form explosive mixtures with air.

5.3. Advice for firefighters
In case of fire: Wear self-contained breathing apparatus.

Additional information
Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.
SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Remove all sources of ignition. Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions
Do not allow uncontrolled discharge of product into the environment. Danger of explosion.

6.3. Methods and material for containment and cleaning up
Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections
Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Advice on safe handling
If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Advice on protection against fire and explosion
Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air.

7.2. Conditions for safe storage, including any incompatibilities
Requirements for storage rooms and vessels
Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Advice on storage compatibility
Do not store together with: Oxidising agent. Pyrophoric or self-heating substances.

7.3. Specific end use(s)
Cleaning agent

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
Exposure limits (EH40)

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Substance</th>
<th>ppm</th>
<th>mg/m³</th>
<th>fibres/ml</th>
<th>Category</th>
<th>Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-64-1</td>
<td>Acetone</td>
<td>500</td>
<td>1210</td>
<td></td>
<td>TWA (8 h)</td>
<td>WEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1500</td>
<td>3620</td>
<td></td>
<td>STEL (15 min)</td>
<td>WEL</td>
</tr>
<tr>
<td>64-17-5</td>
<td>Ethanol</td>
<td>1000</td>
<td>1920</td>
<td></td>
<td>TWA (8 h)</td>
<td>WEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>STEL (15 min)</td>
<td>WEL</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Revision No: 1,0   GB - EN   Print date: 15.02.2018
Appropriate engineering controls
If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe
gas/fumes/vapour/spray.

Protective and hygiene measures
Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.
Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or
drink.

Eye/face protection
Suitable eye protection: goggles.

Hand protection
When handling with chemical substances, protective gloves must be worn with the CE-label including the four
control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the
specific working place concentration and quantity of hazardous substances. For special purposes, it is
recommended to check the resistance to chemicals of the protective gloves mentioned above together with the
supplier of these gloves.

Skin protection
Flame-retardant protective clothing. Wear anti-static footwear and clothing.

Respiratory protection
In case of inadequate ventilation wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour:</td>
<td>orange</td>
</tr>
<tr>
<td>Odour:</td>
<td>Solvent</td>
</tr>
<tr>
<td>pH-Value:</td>
<td>not determined</td>
</tr>
</tbody>
</table>

Changes in the physical state

<table>
<thead>
<tr>
<th>Melting point:</th>
<th>not determined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial boiling point and boiling range:</td>
<td>55 °C</td>
</tr>
<tr>
<td>Flash point:</td>
<td>&lt;0 °C</td>
</tr>
</tbody>
</table>

Flammability

<table>
<thead>
<tr>
<th>Solid:</th>
<th>not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas:</td>
<td>not applicable</td>
</tr>
</tbody>
</table>

Explosive properties

negative, no explosion

<table>
<thead>
<tr>
<th>Lower explosion limits:</th>
<th>2.6 vol. %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper explosion limits:</td>
<td>15 vol. %</td>
</tr>
</tbody>
</table>

Auto-ignition temperature

<table>
<thead>
<tr>
<th>Solid:</th>
<th>not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas:</td>
<td>not applicable</td>
</tr>
</tbody>
</table>

Decomposition temperature: not determined

Oxidizing properties

Not oxidising.

Vapour pressure: not determined

Density: not determined
**Water solubility:** The study does not need to be conducted because the substance is known to be insoluble in water

**Solubility in other solvents**
- not determined

**Partition coefficient:** not determined

**Vapour density:** not determined

**Evaporation rate:** not determined

**Solvent content:** 100.00 %

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**
- Highly flammable.

**10.2. Chemical stability**
- The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**
- No known hazardous reactions.

**10.4. Conditions to avoid**
- Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air.

**10.5. Incompatible materials**
- No information available.

**10.6. Hazardous decomposition products**
- No known hazardous decomposition products.

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

**Acute toxicity**

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Exposure route</th>
<th>Dose</th>
<th>Species</th>
<th>Source</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5</td>
<td>ethanol, ethyl alcohol</td>
<td>oral</td>
<td>LD50</td>
<td>6200</td>
<td>Rat</td>
<td>IUCLID</td>
</tr>
<tr>
<td></td>
<td></td>
<td>inhalative (4 h) vapour</td>
<td>LC50</td>
<td>&gt;20 mg/l</td>
<td>Mouse</td>
<td></td>
</tr>
<tr>
<td>67-64-1</td>
<td>acetone; propan-2-one; propanone</td>
<td>oral</td>
<td>LD50</td>
<td>5800</td>
<td>Rat</td>
<td>RTECS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>dermal</td>
<td>LD50</td>
<td>20000</td>
<td>Rabbit</td>
<td>IUCLID</td>
</tr>
<tr>
<td></td>
<td></td>
<td>inhalative (4 h) vapour</td>
<td>LC50</td>
<td>76 mg/l</td>
<td>Rat</td>
<td></td>
</tr>
</tbody>
</table>

**Additional information on tests**
- The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].
SECTION 12: Ecological information

12.1. Toxicity

The product is not: Ecotoxic.

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>EC50</th>
<th>[h]</th>
<th>[d]</th>
<th>Species</th>
<th>Source</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5</td>
<td>ethanol, ethyl alcohol</td>
<td>9268 -</td>
<td>48</td>
<td></td>
<td>Daphnia magna</td>
<td>IUCLID</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acute crustacea toxicity</td>
<td>14221 mg/l</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67-64-1</td>
<td>acetone; propan-2-one; propanone</td>
<td>5540</td>
<td>96</td>
<td>96</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acute fish toxicity</td>
<td>6100</td>
<td>48</td>
<td>48</td>
<td>Onchorhynchus</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>mykiss</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5</td>
<td>ethanol, ethyl alcohol</td>
<td>-0.31</td>
</tr>
<tr>
<td>67-64-1</td>
<td>acetone; propan-2-one; propanone</td>
<td>-0.24</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The product has not been tested.

12.6. Other adverse effects

No information available.

Further information

Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

Contaminated packaging

Wash with plenty of water. Completely emptied packages can be recycled.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: UN 1993
14.2. UN proper shipping name: FLAMMABLE LIQUID, N.O.S.(ethanol, ethyl alcoholacetone; propan-2-one; propanone)
14.3. Transport hazard class(es): 3
14.4. Packing group: II

Hazard label: 3
Classification code: F1
Special Provisions: 274 601 640D
Limited quantity: 1 L
Excepted quantity: E2
Transport category: 2
Hazard No: 33
Tunnel restriction code: D/E

Inland waterways transport (ADN)
14.1. UN number: UN 1993
14.2. UN proper shipping name: FLAMMABLE LIQUID, N.O.S.(ethanol, ethyl alcoholacetone; propan-2-one; propanone)
14.3. Transport hazard class(es): 3
14.4. Packing group: II
Hazard label: 3

Marine transport (IMDG)
14.1. UN number: UN 1993
14.2. UN proper shipping name: FLAMMABLE LIQUID, N.O.S.(ethanol, ethyl alcohol, Acetone)
14.3. Transport hazard class(es): 3
14.4. Packing group: II
Hazard label: 3

Air transport (ICAO-TI/ATA-DGR)
14.1. UN number: UN 1993
14.2. UN proper shipping name: FLAMMABLE LIQUID, N.O.S.(ethanol, ethyl alcohol, Acetone)
14.3. Transport hazard class(es): 3
14.4. Packing group: II
Hazard label: 3

Special Provisions: A3
Limited quantity Passenger: 1 L

EmS: F-E, S-E
14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

Warning: Combustible liquid.

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 regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3: ethanol, ethyl alcohol; acetone; propan-2-one; propanone

2010/75/EU (VOC): 100 %
2004/42/EC (VOC): 100 %

National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Water contaminating class (D): 1 - slightly water contaminating

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
(IMEuropean Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized 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
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

<table>
<thead>
<tr>
<th>Classification</th>
<th>Classification procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flam. Liq. 2; H225</td>
<td>On basis of test data</td>
</tr>
<tr>
<td>Eye Imit. 2; H319</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

Relevant H and EUH statements (number and full text)

H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
EUH066 Repeated exposure may cause skin dryness or cracking.
Further Information

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor’s safety data sheet.)