S.A. LIPMES 08243 Manresa (Barcelona)

1 Identification of the substance / preparation and of the company

1.1 Product identifier

Zinc ammonium chloride liquid

Registration number 01-2119557900-37-0001

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

Usage only in accordance with the identified usages as stipulated in the CSR/CSA. Raw material for industrial applications

1.3 Details of the supplier of the safety data sheet

Company S.A. LIPMES
Creu Guixera s/n
08243 Manresa (Barcelona) / SPAIN
Phone +34 938770447
Fax +34 938741160
E-mail lipmes@lipmes.com

Responsible Schroeder@chemiebuero.de

1.4 Emergency phone

+49 (0) 89-19240 (24h)

2 Hazards identification

2.1 Classification of the substance or mixture

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

Acute Tox. 4, H302
Skin Corr. 1B, H314
Aquatic Acute 1, H400
Aquatic Chronic 1, H410

2.1.2 Classification according to Regulation 67/548/EEC or 1999/45/EC

C-N, R 22-34-50/53

2.2 Label elements

Hazard pictograms

Signal word DANGER

Contains Ammonium zinc chloride EINECS: 258-054-8
Diammonium tetrachlorozincate(2-) EINECS: 238-687-6
Ammonium chloride EU-INDEX 017-014-00-8
Triammonium pentachlorozincate(3-) EINECS: 238-688-1
Zinc chloride EU-INDEX 030-003-00-2

Hazard statements

H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P260 Do not breathe dust.
P304 P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P273 Avoid release to the environment.
P405 Store locked up.

Special labelling not applicable
2.3 Other hazards

Physico-chemical hazards: See chapter 10.
Human health dangers: See chapter 11.
Environmental hazards: See chapter 12.
Other hazards: No particular hazards known.

3 Composition / Information on ingredients

3.1 Substances

<table>
<thead>
<tr>
<th>Substance</th>
<th>Range [%]</th>
<th>CAS</th>
<th>EINECS/ELINCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc chloride</td>
<td>&gt;1</td>
<td>7646-85-7</td>
<td>231-592-0</td>
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<td>EU-INDEX: 030-003-00-2</td>
<td>ECB-Nr.:</td>
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<td>GHS/CLP:</td>
<td>Acute Tox. 4, H302 - Skin Corr. 1B, H314 - Aquatic Acute 1, H400 - Aquatic Chronic 1, H410</td>
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<td>EEC: C-N, R22-34-50/53</td>
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<td>235-186-4</td>
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<td>ECB-Nr.:</td>
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<td></td>
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<td>EEC: Xn, R22-36</td>
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<td></td>
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<td>ECB-Nr.:</td>
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<tr>
<td>GHS/CLP:</td>
<td>Acute Tox. 4, H302 - Skin Corr. 1B, H314 - Aquatic Chronic 1, H410</td>
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<td></td>
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<tr>
<td>EEC: C-N, R22-34-50/53</td>
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<td>Diammonium tetrachlorozincate(2-)</td>
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<td>238-687-6</td>
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<td></td>
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<td>ECB-Nr.:</td>
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<tr>
<td>GHS/CLP:</td>
<td>Acute Tox. 4, H302 - Skin Corr. 1B, H314 - Aquatic Chronic 1, H410</td>
<td></td>
<td></td>
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<tr>
<td>EEC: C-N, R22-34-50/53</td>
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<tr>
<td>Triammonium pentachlorozincate(3-)</td>
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<td>238-688-1</td>
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<td>GHS/CLP:</td>
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<tr>
<td>EEC: C-N, R22-34-50/53</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

3.2 Mixtures

The product in question is a substance.

Comment on component parts: This product is a mixture of salts. Substances of Very High Concern - SVHC: substances are not contained or below 0,1%. For the wording of the listed risk phrases refer to section 16.

4 First aid measures

4.1 Description of first aid measures

General information: Remove contaminated soaked clothing immediately and dispose of safely.

Inhalation: Consult a doctor immediately.
Ensure supply of fresh air.

Skin contact: Immediate medical treatment necessary, as untreated burns can result in slow-healing wounds.
In case of contact with skin wash off immediately with plenty of water.

Eye contact: Shield unaffected eye.
In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice.

Ingestion: Consult a doctor immediately.
Rinse out mouth and give plenty of water to drink.
Do not induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

No informations available.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
5 Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Product itself is non-combustible. Fire extinguishing method of surrounding areas must be considered.

Extinguishing media that must not be used

Full water jet.

5.2 Special hazards arising from the substance or mixture

Hydrogen chloride (HCl).
Nitrogen oxides (NOx).

5.3 Advice for firefighters

Wear full protective suit.
Use self-contained breathing apparatus.
Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.

6.2 Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers).
Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Pick up with absorbent material (e.g. sand, sawdust, universal absorbent, diatomaceous earth).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See Chapter 8+13

7 Handling and storage

7.1 Precautions for safe handling

No special measures necessary if used correctly.
No special measures necessary.

7.2 Conditions for safe storage, including any incompatibilities

Provide acid-resistant floor.
Do not store with alkalies.
Keep container in a well-ventilated place.
Keep container tightly closed.

7.3 Specific end use(s)

See product use, Chapter 1.2
Usage only in accordance with the identified usages as stipulated in the CSR/CSA.

8 Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (GB)

<table>
<thead>
<tr>
<th>Substance / WEL: Workplace exposure limit</th>
<th>Range [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc chloride / - ppm, 1 mg/m³, fume</td>
<td>-</td>
</tr>
<tr>
<td>Ammonium chloride / - ppm, 10 mg/m³, -</td>
<td>-</td>
</tr>
</tbody>
</table>
8.2 Exposure controls

Additional advice on system design
Ensure adequate ventilation on workstation.
Generic Exposure Scenarios only in accordance with the identified usages as stipulated in the CSR/CSA.

Eye protection
Tightly fitting goggles.

Hand protection
The details concerned are recommendations. Please contact the glove supplier for further information.
In full contact
Butyl rubber, >480 min (EN 374).

Skin protection
Acid-resistant protective clothing.

Other
Avoid contact with eyes and skin.
The product is to be handled only by regularly instructed technical personnel.

Respiratory protection
Breathing apparatus in the event of high concentrations.
Short term: filter apparatus, filter P2.

Thermal hazards
Not applicable

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Colourless</td>
</tr>
<tr>
<td>Odor</td>
<td>Odourless</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not applicable</td>
</tr>
<tr>
<td>pH-value</td>
<td>Acidic</td>
</tr>
<tr>
<td>pH-value [1%]</td>
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<tr>
<td>Boiling point [°C]</td>
<td>Not determined</td>
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<tr>
<td>Flash point [°C]</td>
<td>Not applicable</td>
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<tr>
<td>Flammability [°C]</td>
<td>Not applicable</td>
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<tr>
<td>Lower explosion limit</td>
<td>Not applicable</td>
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<tr>
<td>Upper explosion limit</td>
<td>Not applicable</td>
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<tr>
<td>Oxidizing properties</td>
<td>No</td>
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<tr>
<td>Vapour pressure [kPa]</td>
<td>Not determined</td>
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<tr>
<td>Density [g/ml]</td>
<td>Not determined</td>
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<tr>
<td>Bulk density [kg/m³]</td>
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<tr>
<td>Solubility in water</td>
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<tr>
<td>Partition coefficient [n-octanol/water]</td>
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<tr>
<td>Viscosity</td>
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<td>Relative vapour density determined in air</td>
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<tr>
<td>Evaporation speed</td>
<td>Not determined</td>
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<tr>
<td>Melting point [°C]</td>
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<tr>
<td>Autoignition temperature [°C]</td>
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<tr>
<td>Decomposition temperature</td>
<td>Not applicable</td>
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</tbody>
</table>

9.2 Other information

No informations available.

10 Stability and reactivity

10.1 Reactivity

No dangerous reactions known if used as directed.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).
10.3 Possibility of hazardous reactions

Reactions with alkalies (lyes).

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

Various metals.

10.6 Hazardous decomposition products

No hazardous decomposition products known.

11 Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50, oral, Rat: 1100 - 1260 mg/kg (akt. Sub.)

Serious eye damage/irritation not determined
Skin corrosion/irritation not determined
Respiratory or skin sensitisation not determined
STOT-single exposure not determined
STOT-repeated exposure not determined
Mutagenicity not determined
Reproduction toxicity not determined
Carcinogenicity not determined
General remarks

The toxicological information is based on the main components.

12 Ecological information

12.1 Toxicity

LC50, (96h), Oncorhynchus mykiss: 0,169 mg Zn/l (Lit.). M=1
LC50, (96h), Pimephales promelas: 0,78/0,33 mg Zn/l (Lit.). M=1
EC50, (48h), Ceriodaphnia dubia: 0,147 - 0,413 mg Zn/l (Lit.). M=1

12.2 Persistence and degradability

Behaviour in environment compartments not determined
Behaviour in sewage plant not determined
Biological degradability not applicable

12.3 Bioaccumulative potential

No informations available.

12.4 Mobility in soil

No informations available.

12.5 Results of PBT and vPvB assessment

not applicable

12.6 Other adverse effects

Do not discharge product unmonitored into the environment.
13 Disposal considerations

13.1 Waste treatment methods

Coordinate the waste disposal with the national authorities.

**Product**

Dispose of as hazardous waste.

**Waste no. (recommended)**

060313*

**Contaminated packaging**

Packaging that cannot be cleaned should be disposed of as for product. Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

**Waste no. (recommended)**

150110*

14 Transport information

14.1 UN number

See point 14.2 in accordance with UN shipping name.

14.2 UN proper shipping name

**Classification according to ADR**

UN 1840 ZINC CHLORIDE SOLUTION 8 N III

- **Classification Code**
  C1

- **Label**
  ![ADR label]

- **ADR LQ**
  5 l

- **ADR 1.1.3.6 (8.6)**
  Transport category (tunnel restriction code) 3 (E)

**Classification according to IMDG**

UN 1840 Zinc chloride, solution 8 III MARINE POLLUTANT

- **EMS**
  F-A, S-B

- **Label**
  ![IMDG label]

- **IMDG LQ**
  5 l

**Classification according to IATA**

UN 1840 Zinc chloride, solution 8 III

- **Label**
  ![IATA label]

14.3 Transport hazard class(es)

See point 14.2 in accordance with UN shipping name.

14.4 Packing group

See point 14.2 in accordance with UN shipping name.

14.5 Environmental hazards

See point 14.2 in accordance with UN shipping name.

14.6 Special precautions for user

Relevant information under points 6 to 8.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

No informations available.
15 Regulatory information

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


15.2 Chemical safety assessment

For this substance a chemical safety assessment has been carried out.

16 Other informations

R-phrases (Chapter 03)  R 22: Harmful if swallowed.
R 36: Irritating to eyes.
R 34: Causes burns.
R 50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Hazard statements (Chapter 03)  H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H314 Causes severe skin burns and eye damage.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Observe employment restrictions for people  yes

VOC (1999/13/CE)  not applicable

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