

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 06.06.2016

Revision: 06.06.2016

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

- **1.1 Product identifier**
- **Trade name:** LECTRO-KLEEN AEROSOL
- **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** Cleaner solvent
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Spanjaard Ltd.  
748-750 Fifth Street  
Wynberg, Sandton  
2090, South Africa
- **Further information obtainable from:**  
Clinton Palmer - Technical Director  
clinton@spanjaard.biz
- **1.4 Emergency telephone number:** +27 11 386 7100 (SWB), +27 83 564 2625 (cellular)

## SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Aerosol 1                      H222-H229    Extremely flammable aerosol. Pressurised container: May burst if heated.



GHS08 health hazard

|             |       |  |
|-------------|-------|--|
| Repr. 2     | H361f | Suspected of damaging fertility.                                   |
| STOT RE 2   | H373  | May cause damage to organs through prolonged or repeated exposure. |
| Asp. Tox. 1 | H304  | May be fatal if swallowed and enters airways.                      |



GHS09 environment

Aquatic Chronic 2    H411                      Toxic to aquatic life with long lasting effects.



GHS07

|               |      |                                    |
|---------------|------|------------------------------------|
| Skin Irrit. 2 | H315 | Causes skin irritation.            |
| STOT SE 3     | H336 | May cause drowsiness or dizziness. |

- **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, GHS08, GHS09
- **Signal word** Danger
- **Hazard-determining components of labelling:**  
*n*-hexane
- **Hazard statements**  
H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.  
H315 Causes skin irritation.  
H361f Suspected of damaging fertility.  
H336 May cause drowsiness or dizziness.

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H373 May cause damage to organs through prolonged or repeated exposure.

H304 May be fatal if swallowed and enters airways.

H411 Toxic to aquatic life with long lasting effects.

**· Precautionary statements**

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P405 Store locked up.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**· Additional information:**

100,0 % by mass of the contents are flammable

**· 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.**· Dangerous components:**

|   |   |       |
|---|---|-------|
| CAS: 110-54-3<br>EINECS: 203-777-6<br>Index number: 601-037-00-0<br>RTECS: MN 9275000 | n-hexane<br>Flam. Liq. 2, H225<br>Repr. 2, H361f; STOT RE 2, H373; Asp. Tox. 1, H304<br>Aquatic Chronic 2, H411<br>Skin Irrit. 2, H315; STOT SE 3, H336 | 60,0% |
| CAS: 106-97-8<br>EINECS: 203-448-7<br>Index number: 601-004-00-0<br>RTECS: EJ 4200000 | butane<br>Flam. Gas 1, H220<br>Press. Gas C, H280   | 40,0% |

**· 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:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

**· After inhalation:** In case of unconsciousness place patient stably in side position for transportation.**· After skin contact:** Immediately wash with water and soap and rinse thoroughly.**· After eye contact:** Rinse opened eye for several minutes under running water.**· After swallowing:** If symptoms persist consult doctor.**· 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:** CO<sub>2</sub>, sand, extinguishing powder. Do not use water.**· For safety reasons unsuitable extinguishing agents:** Water with full jet**· 5.2 Special hazards arising from the substance or mixture** No further relevant information available.

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- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

### 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:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- **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**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.
- **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.  
Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.  
Do not spray onto a naked flame or any incandescent material.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Store in a cool location.  
Observe official regulations on storing packagings with pressurised containers.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Keep container tightly sealed.  
Do not seal receptacle gas tight.  
Store in cool, dry conditions in well sealed receptacles.  
Protect from heat and direct sunlight.
- **7.3 Specific end use(s)** No further relevant information available.

### 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:**

**110-54-3 n-hexane**

|                     |   |
|---------------------|---|
| IOELV (EU)          | Long-term value: 72 mg/m <sup>3</sup> , 20 ppm                      |
| WEL (Great Britain) | Long-term value: 72 mg/m <sup>3</sup> , 20 ppm                      |
| AGW (Germany)       | Long-term value: 180 mg/m <sup>3</sup> , 50 ppm<br>8(II);DFG, EU, Y |

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**106-97-8 butane**

|                     |   |
|---------------------|---|
| WEL (Great Britain) | Short-term value: 1810 mg/m <sup>3</sup> , 750 ppm<br>Long-term value: 1450 mg/m <sup>3</sup> , 600 ppm<br>Carc (if more than 0,1% of buta-1,3-diene) |
| AGW (Germany)       | Long-term value: 2400 mg/m <sup>3</sup> , 1000 ppm<br>4(II);DFG   |

**· Ingredients with biological limit values:****110-54-3 n-hexane**

|               |   |
|---------------|---|
| BGW (Germany) | 5 mg/l<br>Untersuchungsmaterial: Urin<br>Probennahmezeitpunkt: Expositionsende bzw. Schichtende<br>Parameter: 2,5-Hexandion plus 4,5-Dihydroxy-2-hexanon (nach Hydrolyse) |
|---------------|---|

**· Additional information:** The lists valid during the making were used as basis.**· 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 skin.  
Avoid contact with the eyes and skin.

**· Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.  
Suitable respiratory protective device recommended.

**· Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**· Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**· 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:** Safety glasses

## SECTION 9: Physical and chemical properties

**· 9.1 Information on basic physical and chemical properties****· General Information****· Appearance:**

**Form:** Compressed liquefied gas

**Colour:** Clear

**· Odour:** Characteristic

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|   |  |
|---|--|
| · <b>Odour threshold:</b>   | Not determined.  |
| · <b>pH-value:</b>  | Not determined.  |
| · <b>Change in condition</b><br><b>Melting point/Melting range:</b><br><b>Boiling point/Boiling range:</b>      | Undetermined.<br>0 °C  |
| · <b>Flash point:</b>   | -60 °C   |
| · <b>Flammability (solid, gaseous):</b>   | Not applicable.  |
| · <b>Ignition temperature:</b>  | 240 °C   |
| · <b>Decomposition temperature:</b>   | Not determined.  |
| · <b>Self-igniting:</b>   | Product is not selfigniting.   |
| · <b>Danger of explosion:</b>   | Not determined.  |
| · <b>Explosion limits:</b><br><b>Lower:</b><br><b>Upper:</b>  | 1,2 Vol %<br>8,5 Vol %   |
| · <b>Vapour pressure at 20 °C:</b>  | 2100 hPa   |
| · <b>Density at 20 °C:</b><br>· <b>Relative density</b><br>· <b>Vapour density</b><br>· <b>Evaporation rate</b> | 0,4 g/cm <sup>3</sup><br>Not determined.<br>Not determined.<br>Not applicable. |
| · <b>Solubility in / Miscibility with water:</b>  | Not miscible or difficult to mix.  |
| · <b>Partition coefficient (n-octanol/water):</b>   | Not determined.  |
| · <b>Viscosity:</b><br><b>Dynamic:</b><br><b>Kinematic:</b>   | Not determined.<br>Not determined.   |
| · <b>Solvent content:</b><br><b>Organic solvents:</b><br><b>VOC (EC)</b><br>· <b>9.2 Other information</b>      | 100,0 %<br>100,00 %<br>No further relevant information available.              |

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

### 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**  
Causes skin irritation.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.

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- **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**  
Suspected of damaging fertility.
- **STOT-single exposure**  
May cause drowsiness or dizziness.
- **STOT-repeated exposure**  
May cause damage to organs through prolonged or repeated exposure.
- **Aspiration hazard**  
May be fatal if swallowed and enters airways.

### 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.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies.  
Toxic for aquatic organisms
- **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 together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

### SECTION 14: Transport information

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>· <b>14.1 UN-Number</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>   | <p>UN1950</p>  |
| <ul style="list-style-type: none"> <li>· <b>14.2 UN proper shipping name</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG</b></li> <li>· <b>IATA</b></li> </ul> | <p>1950 AEROSOLS<br/>AEROSOLS (n-hexane), MARINE POLLUTANT<br/>AEROSOLS, flammable</p> |

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· **14.3 Transport hazard class(es)**· **ADR**

- |                |             |
|----------------|-------------|
| · <b>Class</b> | 2 5F Gases. |
| · <b>Label</b> | 2.1         |

· **IMDG, IATA**

- |                |     |
|----------------|-----|
| · <b>Class</b> | 2.1 |
| · <b>Label</b> | 2.1 |

· **14.4 Packing group**

- |                          |      |
|--------------------------|------|
| · <b>ADR, IMDG, IATA</b> | Void |
|--------------------------|------|

· **14.5 Environmental hazards:**

Product contains environmentally hazardous substances:  
n-hexane

· **Marine pollutant:**

Yes

· **14.6 Special precautions for user**

Warning: Gases.

· **Danger code (Kemler):**

-

· **EMS Number:**

F-D,S-U

· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

· **Transport/Additional information:**· **ADR**

- |                                  |    |
|----------------------------------|----|
| · <b>Limited quantities (LQ)</b> | 1L |
| · <b>Transport category</b>      | 2  |
| · <b>Tunnel restriction code</b> | D  |

· **UN "Model Regulation":**

UN1950, AEROSOLS, 2.1

### SECTION 15: Regulatory information

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

No further relevant information available.

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

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

- H220 Extremely flammable gas.  
H225 Highly flammable liquid and vapour.  
H280 Contains gas under pressure; may explode if heated.  
H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H336 May cause drowsiness or dizziness.  
H361f Suspected of damaging fertility.

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*H373 May cause damage to organs through prolonged or repeated exposure.*

*H411 Toxic to aquatic life with long lasting effects.*

· **Department issuing SDS:** Technical Department

· **Contact:** Mr Clinton Palmer

· **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)

VOC: Volatile Organic Compounds (USA, EU)

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

LC50: Lethal concentration, 50 percent

SVHC: Substances of Very High Concern

Flam. Gas 1: Flammable gases, Hazard Category 1

Aerosol 1: Flammable aerosols, Hazard Category 1

Press. Gas C: Gases under pressure: Compressed gas

Flam. Liq. 2: Flammable liquids, Hazard Category 2

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Repr. 2: Reproductive toxicity, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

Asp. Tox. 1: Aspiration hazard, Hazard Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

· **\* Data compared to the previous version altered.**

EU