SAFETY DATA SHEET
ELECTRONIC CLEANING SOLVENT PLUS AEROSOL

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier
Product name: ELECTRONIC CLEANING SOLVENT PLUS AEROSOL
Product No.: ECSP-a, EECSP200D, EECSP400D, ZE

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Cleaning agent.

1.3. Details of the supplier of the safety data sheet
Supplier: ELECTROLUBE. A division of HK WENTWORTH LTD
ASHBY PARK, COALFIELD WAY, ASHBY DE LA ZOUCH, LEICESTERSHIRE LE65 1JR UNITED KINGDOM
+44 (0)1530 419600 +44 (0)1530 416640 info@hkw.co.uk

1.4. Emergency telephone number
+44 (0)1530 419600 between 8.30am - 5.00pm GMT Mon – Fri

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture
Classification (EC 1272/2008)
Physical and Chemical Hazards: Flam. Aerosol 1 - H222
Human health: EUH066;STOT SE 3 - H336
Environment: Aquatic Chronic 2 - H411
Classification (1999/45/EEC)
The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Physical and Chemical Hazards
Aerosol containers can explode when heated, due to excessive pressure build-up. When sprayed on a naked flame or any incandescent material the aerosol vapours can be ignited.

2.2. Label elements
Label In Accordance With (EC) No. 1272/2008

Signal Word
Danger

Hazard Statements
H222 Extremely flammable aerosol.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.
Precautionary Statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Supplementary Precautionary Statements

P211 Do not spray on an open flame or other ignition source.
P251 Pressurized container: Do not pierce or burn, even after use.
P261 Avoid breathing vapour/spray.
P410+412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F.

Supplemental label information

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

Not Classified as PBT/vPvB by current EU criteria.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Concentration</th>
<th>CAS-No.:</th>
<th>EC No.:</th>
<th>Registration Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>PENTANE</td>
<td>80-100%</td>
<td>109-66-0</td>
<td>203-692-4</td>
<td>01-2119459286-30</td>
</tr>
<tr>
<td>PROPAN-2-OL</td>
<td>1-5%</td>
<td>67-63-0</td>
<td>200-661-7</td>
<td></td>
</tr>
</tbody>
</table>

Classification (67/548/EEC)

- Flam. Liq. 2 - H225
- EUH066
- STOT SE 3 - H336
- Asp. Tox. 1 - H304
- Aquatic Chronic 2 - H411

Classification (EC 1272/2008)

- Flam. Liq. 2 - H225
- Eye Irrit. 2 - H319
- STOT SE 3 - H336

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Composition Comments

Ingredients not listed are classified as non-hazardous or at a concentration below reportable levels.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation
Move the exposed person to fresh air at once. Keep the affected person warm and at rest. Get prompt medical attention. Get medical attention.

Ingestion
Immediately rinse mouth and provide fresh air.

Skin contact
Wash the skin immediately with soap and water. Get medical attention if any discomfort continues.

Eye contact
Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

4.2. Most important symptoms and effects, both acute and delayed

4.3. Indication of any immediate medical attention and special treatment needed
SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media
Use: Powder. Dry chemicals, sand, dolomite etc. Water spray, fog or mist.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products
Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

Unusual Fire & Explosion Hazards
Aerosol cans may explode in a fire.

Specific hazards
The product is flammable, and heating may generate vapours which may form explosive vapour/air mixtures. Aerosol containers can explode when heated, due to excessive pressure build-up.

5.3. Advice for firefighters

Special Fire Fighting Procedures
Move container from fire area if it can be done without risk.

Protective equipment for fire-fighters
Self contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Do not discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Absorb in vermiculite, dry sand or earth and place into containers. Ventilate well.

6.4. Reference to other sections

Wear protective clothing as described in Section 8 of this safety data sheet. See section 11 for additional information on health hazards. The product contains a substance which is hazardous to aquatic organisms and which may cause long term adverse effects in the aquatic environment. See section 12 as well. For waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Avoid spilling, skin and eye contact. Provide good ventilation.

7.2. Conditions for safe storage, including any incompatibilities

Store at moderate temperatures in dry, well ventilated area.

7.3. Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

<table>
<thead>
<tr>
<th>Name</th>
<th>STD</th>
<th>TWA - 8 Hrs</th>
<th>STEL - 15 Min</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PENTANE</td>
<td>WEL</td>
<td>600 ppm</td>
<td>1800 mg/m3</td>
<td></td>
</tr>
<tr>
<td>PROPAN-2-OL</td>
<td>WEL</td>
<td>400 ppm</td>
<td>999 mg/m3</td>
<td>500 ppm</td>
</tr>
</tbody>
</table>

WEL = Workplace Exposure Limit.
ELECTRONIC CLEANING SOLVENT PLUS AEROSOL

PENTANE (CAS: 109-66-0)

<table>
<thead>
<tr>
<th>DNEL</th>
<th>Industry Dermal</th>
<th>Long Term</th>
<th>Systemic Effects</th>
<th>432 mg/kg/day</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Industry Inhalation.</td>
<td>Long Term</td>
<td>Systemic Effects</td>
<td>3000 mg/m3</td>
</tr>
<tr>
<td></td>
<td>Consumer Oral</td>
<td>Long Term</td>
<td>Systemic Effects</td>
<td>214 mg/kg/day</td>
</tr>
<tr>
<td></td>
<td>Consumer Dermal</td>
<td>Long Term</td>
<td>Systemic Effects</td>
<td>214 mg/kg/day</td>
</tr>
<tr>
<td></td>
<td>Consumer Inhalation.</td>
<td>Long Term</td>
<td>Systemic Effects</td>
<td>643 mg/m3</td>
</tr>
</tbody>
</table>

PNEC

| Water  | 0.23 mg/l |
| Sediment | 1.2 mg/kg |
| Soil   | 0.55 mg/kg |
| STP    | 3.6 mg/l |

PROPAN-2-OL (CAS: 67-63-0)

<table>
<thead>
<tr>
<th>DNEL</th>
<th>Industry Dermal</th>
<th>888 mg/kg/day</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Industry Inhalation.</td>
<td>500 mg/m3</td>
</tr>
<tr>
<td></td>
<td>Consumer Dermal</td>
<td>319 mg/kg/day</td>
</tr>
<tr>
<td></td>
<td>Consumer Inhalation.</td>
<td>89 mg/m3</td>
</tr>
<tr>
<td></td>
<td>Consumer Oral</td>
<td>26 mg/kg/day</td>
</tr>
</tbody>
</table>

PNEC

| Freshwater | 140.9 mg/l |
| Marinewater | 140.9 mg/l |
| Sediment   | 552 mg/kg |
| Soil       | 28 mg/kg |

8.2. Exposure controls

Process conditions
Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station.

Engineering measures
Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

Respiratory equipment
If ventilation is insufficient, suitable respiratory protection must be provided. It is recommended to use respiratory equipment with combination filter, type A2/P2. EN14387

Hand protection
Protective gloves must be used if there is a risk of direct contact or splash. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. Gloves of nitrile rubber, PVA or Viton are recommended. Gloves should conform to EN374

Eye protection
Wear approved chemical safety goggles where eye exposure is reasonably probable. EN166

Other Protection
Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

Hygiene measures
Wash hands at the end of each work shift and before eating, smoking and using the toilet. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke. DO NOT SMOKE IN WORK AREA!

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Aerosol. Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>Colourless.</td>
</tr>
<tr>
<td>Odour</td>
<td>Characteristic.</td>
</tr>
<tr>
<td>Solubility</td>
<td>Immiscible with water</td>
</tr>
<tr>
<td>Initial boiling point and boiling range (°C)</td>
<td>36 (96.8 F)</td>
</tr>
<tr>
<td>Melting point (°C)</td>
<td>-130 (-202 F)</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.650 @ 20 °C (68 F)</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>650 kg/m3</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>5.33 kPa @ 19 °C (66.2 F)</td>
</tr>
<tr>
<td>Flash point (°C)</td>
<td>- 48 (-54.4 F) CC (Closed cup).</td>
</tr>
<tr>
<td>Auto Ignition Temperature (°C)</td>
<td>309 (588.2 F)</td>
</tr>
<tr>
<td>Flammability Limit - Lower(%)</td>
<td>1.4</td>
</tr>
<tr>
<td>Flammability Limit - Upper(%)</td>
<td>7.8</td>
</tr>
<tr>
<td>Comments</td>
<td>Information given concerns the major ingredient.</td>
</tr>
</tbody>
</table>
9.2. Other information
Volatile Description Volatile

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity
No specific reactivity hazards associated with this product.

10.2. Chemical stability
Stable under normal temperature conditions.

10.3. Possibility of hazardous reactions
Not available.
Hazardous Polymerisation
Will not polymerise.

10.4. Conditions to avoid
Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials
Materials To Avoid
Strong alkalis. Strong acids.

10.6. Hazardous decomposition products
Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Toxicological information
No information available.
Other Health Effects
This substance has no evidence of carcinogenic properties.

Inhalation
May cause irritation to the respiratory system. Vapours may cause headache, fatigue, dizziness and nausea. High concentrations of vapours may irritate respiratory system and lead to headache, fatigue, nausea and vomiting.

Skin contact
Product has a defatting effect on skin. Prolonged contact may cause dryness of the skin. Prolonged or repeated exposure may cause severe irritation.

Eye contact
Irritating to eyes.
Route of entry
Inhalation.

Toxicological information on ingredients.
ELECTRONIC CLEANING SOLVENT PLUS AEROSOL
PENTANE (CAS: 109-66-0)

Toxic Dose 1 - LD 50
>2000 mg/kg (oral rat)
Toxic Dose 2 - LD 50
446 mg/kg (ivn-mouse)
Toxic Conc. - LC 50
364, 000 mg/m3/30h (inh-rat)

Acute toxicity:
Acute Toxicity (Oral LD50)
> 2000 mg/kg

Acute Toxicity (Inhalation LC50)
> 40 mg/l (vapours) Rat 4 hours

PROPAN-2-OL (CAS: 67-63-0)

Acute Toxicity (Oral LD50)
5280 mg/kg Rat

Acute Toxicity (Dermal LD50)
12800 mg/kg Rabbit

Acute Toxicity (Inhalation LC50)
72.6 mg/l (vapours) Rat 4 hours

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity
Dangerous for the environment if discharged into watercourses.

12.1. Toxicity

Ecological information on ingredients.

PROPAN-2-OL (CAS: 67-63-0)

Acute Toxicity - Fish
LC50 96 hours 9640 mg/l Pimephales promelas (Fat-head Minnow)

Acute Toxicity - Aquatic Invertebrates
EC50 48 hours 13299 mg/l Daphnia magna

Acute Toxicity - Aquatic Plants
EC50 72 hours > 1.000 mg/l Scenedesmus subspicatus

Acute Toxicity - Microorganisms
EC50 > 1.000 mg/l Activated sludge

12.2. Persistence and degradability

Degradability
There are no data on the degradability of this product.

12.3. Bioaccumulative potential

Bioaccumulative potential
No data available on bioaccumulation.

12.4. Mobility in soil

Mobility:
The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces.

12.5. Results of PBT and vPvB assessment

This product does not contain any PBT or vPvB substances.

12.6. Other adverse effects

SECTION 13: DISPOSAL CONSIDERATIONS
General information
The company should contact first the Industrial Inspection and Pollution section in the Supreme Council of Environment.

13.1. Waste treatment methods
Empty containers must not be burned because of explosion hazard. Dispose of waste and residues in accordance with local authority requirements.

SECTION 14: TRANSPORT INFORMATION

14.1. UN number
UN No. (ADR/RID/ADN) 1950
UN No. (IMDG) 1950
UN No. (ICAO) 1950

14.2. UN proper shipping name
Proper Shipping Name AEROSOLS (PENTANE)

14.3. Transport hazard class(es)
ADR/RID/ADN Class 2.1
ADR/RID/ADN Class Class 2: Gases
ADR Label No. 2.1
IMDG Class 2.1
ICAO Class/Division 2.1
Transport Labels

14.4. Packing group
Not applicable.

14.5. Environmental hazards
Environmentally Hazardous Substance/Marine Pollutant

14.6. Special precautions for user
EMS F-D, S-U
Tunnel Restriction Code (D)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not applicable.

SECTION 15: REGULATORY INFORMATION

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

Guidance Notes
Workplace Exposure Limits EH40.

EU Legislation


Authorisations (Title VII Regulation 1907/2006)
No specific authorisations are noted for this product.

Restrictions (Title VIII Regulation 1907/2006)
No specific restrictions of use are noted for this product.

15.2. Chemical Safety Assessment
No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

Issued By       Helen O'Reilly
Revision Date   APRIL 2013
Revision        3
SDS No.         10354

Risk Phrases In Full
R12             Extremely flammable.
R65             Harmful: may cause lung damage if swallowed.
R11             Highly flammable
R36             Irritating to eyes.
R66             Repeated exposure may cause skin dryness or cracking.
R51/53          Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R67             Vapours may cause drowsiness and dizziness.

Hazard Statements In Full
EUH066          Repeated exposure may cause skin dryness or cracking.
H222            Extremely flammable aerosol.
H225            Highly flammable liquid and vapour.
H304            May be fatal if swallowed and enters airways.
H319            Causes serious eye irritation.
H336            May cause drowsiness or dizziness.
H411            Toxic to aquatic life with long lasting effects.

Disclaimer
This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.