

## SAFETY DATA SHEET

### ELECTRONIC CLEANING SOLVENT PLUS (COMBI)

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

##### 1.1. Product identifier

**Product name** ELECTRONIC CLEANING SOLVENT PLUS (COMBI)  
**Product No.** ECSP-db, EECSP200DB, ZE

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

**Identified uses** Manufacture of electrical equipment

##### 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)

F+;R12. N;R51/53. R66, R67.

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

###### Environment

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point. Dispose of waste and residues in accordance with local authority requirements.

###### 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

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## 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.
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## 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.
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## 2.3. Other hazards

Not Classified as PBT/vPvB by current EU criteria.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2. Mixtures

<b>PENTANE</b>	<b>80-100%</b>	
CAS-No.: 109-66-0	EC No.: 203-692-4	Registration Number: 01-2119459286-30
Classification (EC 1272/2008) Flam. Liq. 2 - H225 EUH066 STOT SE 3 - H336 Asp. Tox. 1 - H304 Aquatic Chronic 2 - H411	Classification (67/548/EEC) F+;R12 Xn;R65 R66 R67 N;R51/53	
<b>PROPAN-2-OL</b>	<b>1-5%</b>	
CAS-No.: 67-63-0	EC No.: 200-661-7	
Classification (EC 1272/2008) Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336	Classification (67/548/EEC) F;R11 Xi;R36 R67	

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.

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

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

Treat Symptomatically.

## 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

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
PENTANE	WEL	600 ppm	1800 mg/m <sup>3</sup>			
PROPAN-2-OL	WEL	400 ppm	999 mg/m <sup>3</sup>	500 ppm	1250 mg/m <sup>3</sup>	

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WEL = Workplace Exposure Limit.

## PENTANE (CAS: 109-66-0)

DNEL				
Industry	Dermal	Long Term	Systemic Effects	432 mg/kg/day
Industry	Inhalation.	Long Term	Systemic Effects	3000 mg/m3
Consumer	Oral	Long Term	Systemic Effects	214 mg/kg/day
Consumer	Dermal	Long Term	Systemic Effects	214 mg/kg/day
Consumer	Inhalation.	Long Term	Systemic Effects	643 mg/m3

### **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)

DNEL			
Industry	Dermal	888	mg/kg/day
Industry	Inhalation.	500	mg/m3
Consumer	Dermal	319	mg/kg/day
Consumer	Inhalation.	89	mg/m3
Consumer	Oral	26	mg/kg/day

### **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**

Appearance	Aerosol. Liquid
Colour	Colourless.
Odour	Characteristic.
Solubility	Immiscible with water
Initial boiling point and boiling range (°C)	36 (96.8 F)
Melting point (°C)	-130 (-202 F)
Relative density	0.650 @ 20 °c (68 F)
Bulk Density	650 kg/m3
Vapour pressure	5.33 kPa @ 19 °c (66.2 F)
Flash point (°C)	- 48 (-54.4 F) CC (Closed cup).
Auto Ignition Temperature (°C)	309 (588.2 F)
Flammability Limit - Lower(%)	1.4

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Flammability Limit - Upper(%)

7.8

Comments

Information given concerns the major ingredient.

## **9.2. Other information**

Volatility 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**

**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 (COMBI)**  
**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/m<sup>3</sup>/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:**

**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**

**12.3. Bioaccumulative potential**

**12.4. Mobility in soil**

**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**

**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**

# ELECTRONIC CLEANING SOLVENT PLUS (COMBI)

## General

This product is packed in accordance with the Limited Quantity Provisions of CDGCPL2, ADR and IMDG. These provisions allow transport of aerosols of less than 1litre packed in cartons of less than 30kg gross to be exempt from control providing that they are labelled in accordance with the requirements of these regulations to show that they are being transported as Limited Quantities. Aerosols not so packed must show the following

### 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)
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### 14.3. Transport hazard class(es)

ADR/RID/ADN Class	2
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

ADR/RID/ADN Packing group	N/A
IMDG Packing group	N/A
ICAO Packing group	N/A

### 14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant



### 14.6. Special precautions for user

EMS	F-D, S-U
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### 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

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716). Control of Substances Hazardous to Health.

# ELECTRONIC CLEANING SOLVENT PLUS (COMBI)

## Guidance Notes

Workplace Exposure Limits EH40.

## EU Legislation

Commission Directive 2000/39/EC of 8 June 2000 establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

### 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	5
SDS No.	10355

### 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.