Revision 6



# SAFETY DATA SHEET POLYURETHANE CONFORMAL COATING

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

#### 1.1. Product identifier

Product name POLYURETHANE CONFORMAL COATING

Product No. PUC-a, EPUC400, ZE

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

Identified uses Conformal coating for appliance protection

## 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

LF65 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 Mon - Fri

## **SECTION 2: HAZARDS IDENTIFICATION**

## 2.1. Classification of the substance or mixture

Classification (1999/45/EEC) F+;R12. N;R51/53. R66.

**Environment** 

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Dangerous for the environment if discharged into watercourses. 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

## Labelling



Extremely flammable



Dangerous for the

Risk Phrases

R12 Extremely flammable.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in

the aquatic environment.

Repeated exposure may cause skin dryness or cracking.

Safety Phrases

A1 Pressurized container: protect from sunlight and do not expose to

temperatures exceeding 50°C. Do not pierce or burn, even after

use.

A2 Do not spray on a naked flame or any incandescent material.

S2 Keep out of the reach of children.

S16 Keep away from sources of ignition - No smoking.

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S23	Do not breathe vapour/spray.
S37	Wear suitable gloves.
S38	In case of insufficient ventilation, wear suitable respiratory equipment.
S57	Use appropriate containment to avoid environmental contamination.
S61	Avoid release to the environment. Refer to special instructions/safety data sheets.
P14	Contains ETHYL METHYL KETOXIME. May produce an allergic reaction.

## 2.3. Other hazards

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

## 3.2. Mixtures

HYDROCARBON DISTILLATE			30-60%
CAS-No.: 64742-82-1	EC No.: 265-185-4		
Classification (EC 1272/2008) Flam. Liq. 3 - H226 EUH066 Asp. Tox. 1 - H304 Aquatic Chronic 2 - H411		Classification (67/548/EEC) Xn;R65. N;R51/53. R10,R66.	
BUTANE			10-30%
CAS-No.: 106-97-8	EC No.: 203-448-7		
Classification (EC 1272/2008) Flam. Gas 1 - H220		Classification (67/548/EEC) F+;R12	
XYLENE			1-5%
CAS-No.: 1330-20-7	EC No.: 215-535-7		
Classification (EC 1272/2008) Flam. Liq. 3 - H226 Acute Tox. 4 - H312 Acute Tox. 4 - H332 Skin Irrit. 2 - H315		Classification (67/548/EEC) R10 Xn;R20/21 Xi;R38	
ETHYL METHYL KETOXIME			< 1%
CAS-No.: 96-29-7	EC No.: 202-496-6		

CAS-No.: 96-29-7	EC No.: 202-496-6		
Classification (EC 1272/2008)		Classification (67/548/EEC)	
Acute Tox. 4 - H312		Carc. Cat. 3;R40	
Eye Dam. 1 - H318		Xn;R21	
Skin Sens. 1 - H317		R43	
Carc. 2 - H351		Xi;R41	

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BENZENE, C10-13-ALKYL DERIVATIVES <0.5%

CAS-No.: 67774-74-7 EC No.: 267-051-0

Classification (EC 1272/2008) Classification (67/548/EEC)

Not classified. N;R50.

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.

#### Eve 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

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.

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#### 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
BUTANE	WEL	600 ppm	1450 mg/m3	750 ppm	1810 mg/m3	
HYDROCARBON DISTILLATE	WEL		600 mg/m3			
XYLENE	WEL	50 ppm	220 mg/m3	100 ppm	441 mg/m3	Sk

WEL = Workplace Exposure Limit.

#### 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

No specific recommendation made, but respiratory protection must be used if the general level exceeds the recommended occupational exposure limit. Use respiratory equipment with combination filter, type A2/P3.

## Hand protection

Protective gloves should 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. Butyl rubber gloves are recommended. Gloves should conform to EN374

## Eye protection

Wear tight-fitting goggles or face shield.

## 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

AppearanceAerosol. LiquidColourColourless.OdourCharacteristic.

Solubility Immiscible with water

Initial boiling point and boiling range <0 (32F)

**Relative density** 0.870 @ 20 °C (68F)

Bulk Density 870 kg/m3

Vapour pressure 0.87 kPa @ 20 °C (68F)

Sk = Can be absorbed through skin.

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Flash point <0 (32F) CC (Closed cup).

Auto Ignition Temperature (°C) 230 (446 F)

Flammability Limit - Lower(%) 1.8
Flammability Limit - Upper(%) 10.0

**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.

**BUTANE (CAS: 106-97-8)** 

## **Acute toxicity:**

Acute Toxicity (Inhalation LC50)

658 mg/l (vapours) Rat 4 hours

## POLYURETHANE CONFORMAL COATING XYLENE (CAS: 1330-20-7)

**Acute toxicity:** 

Acute Toxicity (Oral LD50)

3523 mg/kg Rat

Acute Toxicity (Dermal LD50)

12126 mg/kg Rabbit

Acute Toxicity (Inhalation LC50)

2700 mg/l (vapours) Rabbit 4 hours

#### **Aspiration hazard:**

Inhalation

Harmful by inhalation. Upper respiratory irritation. Central nervous system depression. Vapours may cause drowsiness and dizziness.

Ingestion

Swallowing concentrated chemical may cause severe internal injury. May cause nausea, headache, dizziness and intoxication. Diarrhoea.

Skin contact

Harmful in contact with skin. Irritating to skin.

Eye contact

May cause severe irritation to eyes.

**Target Organs** 

Central nervous system Liver Kidneys

**HYDROCARBON DISTILLATE (CAS: 64742-82-1)** 

Toxic Dose 1 - LD 50

>5000 mg/kg (oral rat)

Toxic Dose 2 - LD 50

>3000 mg/kg (oral-rbt)

Toxic Conc. - LC 50

>11.6 mg/l/4h (inh-rat)

## **SECTION 12: ECOLOGICAL INFORMATION**

## **Ecotoxicity**

Dangerous for the environment if discharged into watercourses.

Ecological information on ingredients.

XYLENE (CAS: 1330-20-7)

## **Ecotoxicity**

The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

## 12.1. Toxicity

Ecological information on ingredients.

XYLENE (CAS: 1330-20-7)

**Acute Toxicity - Aquatic Invertebrates** 

EC50 48 hours 1.0 mg/l Daphnia magna

**Acute Toxicity - Aquatic Plants** 

IC50 72 hours 2.2 mg/l

## 12.2. Persistence and degradability

## Degradability

There are no data on the degradability of this product.

## POLYURETHANE CONFORMAL COATING

Ecological information on ingredients.

XYLENE (CAS: 1330-20-7)

Degradability

The product is biodegradable.

## 12.3. Bioaccumulative potential

## Bioaccumulative potential

No data available on bioaccumulation.

Ecological information on ingredients.

XYLENE (CAS: 1330-20-7)

Bioaccumulation factor

BCF 25.9

Partition coefficient

3.2

12.4. Mobility in soil

Ecological information on ingredients.

XYLENE (CAS: 1330-20-7)

Mobility:

The product is insoluble in water.

## 12.5. Results of PBT and vPvB assessment

This product does not contain any PBT or vPvB substances.

Ecological information on ingredients.

XYLENE (CAS: 1330-20-7)

Not Classified as PBT/vPvB by current EU criteria.

#### 12.6. Other adverse effects

Ecological information on ingredients.

XYLENE (CAS: 1330-20-7)

Not determined.

## **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**

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

<u>14.1. UN number</u>

 UN No. (ADR/RID/ADN)
 1950

 UN No. (IMDG)
 1950

 UN No. (ICAO)
 1950

14.2. UN proper shipping name

Proper Shipping Name AEROSOLS (HYDROCARBON DISTILLATE)

14.3. Transport hazard class(es)

## POLYURETHANE CONFORMAL COATING

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

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

## **Uk Regulatory References**

Chemicals (Hazard Information & Packaging) Regulations.

The Control of Substances Hazardous to Health Regulations 2002 (S.I 2002 No. 2677) with amendments.

## **Environmental Listing**

Rivers (Prevention of Pollution) Act 1961. Control of Pollution Act 1974.

## Statutory Instruments

Control of Substances Hazardous to Health.

#### Approved Code Of Practice

Classification and Labelling of Substances and Preparations Dangerous for Supply. Safety Data Sheets for Substances and Preparations.

## **Guidance Notes**

Workplace Exposure Limits EH40.

## **EU Legislation**

System of specific information relating to Dangerous Preparations. 2001/58/EC.

Dangerous Substance Directive 67/548/EEC.

Dangerous Preparations Directive 1999/45/EC.

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.

## POLYURETHANE CONFORMAL COATING

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.

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

## **SECTION 16: OTHER INFORMATION**

#### **Revision Comments**

Revised in accordance with CHIP3 and EU Directives 1999/45/EC and 2001/58/EC

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 Revision
 6

 SDS No.
 10542

Risk Phrases In Full

R12 Extremely flammable.

R10 Flammable.

R20/21 Harmful by inhalation and in contact with skin.

R21 Harmful in contact with skin.

R65 Harmful: may cause lung damage if swallowed.

R38 Irritating to skin.

R40 Limited evidence of a carcinogenic effect.
R43 May cause sensitisation by skin contact.

R66 Repeated exposure may cause skin dryness or cracking.

R41 Risk of serious damage to eyes.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R50 Very toxic to aquatic organisms.

Hazard Statements In Full

EUH066 Repeated exposure may cause skin dryness or cracking.

H220 Extremely flammable gas.
 H222 Extremely flammable aerosol.
 H226 Flammable liquid and vapour.

H304 May be fatal if swallowed and enters airways.

H312 Harmful in contact with skin.
H315 Causes skin irritation.

H317 May cause an allergic skin reaction.H318 Causes serious eye damage.

H332 Harmful if inhaled.

H351 Suspected of causing cancer.

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.

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ARW300 DCE0.75L GP300SL SSS500ML SYR20ML GP500SL ER2218RP250G ER2224 UR5638 CCRG01L SPG900G DEI05L

ER221935SL HTS100T ASA250ML HTC700G ULL200D EADI200D AFAG35SL ECW025 EADPI200 HTSP100T CMO200D FSC05L

HTC100T OSL400 SYR02ML URC200D ER2223 RST250 SOB200D UR5118RP250G UR5528RP250G DDF400 ML NSCP400H

AFC400D/12 SYR10ML DCA01L