SAFETY DATA SHEET
POLYURETHANE FOAM

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

1.1. Product identifier

Product name POLYURETHANE FOAM

Product No. MPU, EMPU500, ZE

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

Identified uses Resin.

Uses advised against At this moment in time we do not have information on use restrictions. They will be included in this safety data sheet when available

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	Acute Tox. 4 - H332;Skin Irrit. 2 - H315;Eye Irrit. 2 - H319;Resp. Sens. 1 - H334;Skin Sens. 1 - H317;Carc. 2 - H351;STOT SE 3 - H335;STOT RE 2 - H373
Environment	Not classified.

Classification (1999/45/EEC) Xn;R20, R48/20. Carc. Cat. 3;R40. R42/43. Xi;R36/37/38. F+;R12.

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

2.2. Label elements

Contains METHYLENEDIPHENYL DIISOCYANATE

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

Signal Word Danger

Hazard Statements

H222	Extremely flammable aerosol.
H315	Causes skin irritation.

H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P285	In case of inadequate ventilation wear respiratory protection.
P280	Wear protective gloves, eye and face protection.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P313	Get medical advice/attention.
P342+311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

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.
P260	Do not breathe vapour/spray.
P304+341	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P333+313	If skin irritation or rash occurs: Get medical advice/attention.
P410+412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F.

Supplemental label information

EUH204	Contains isocyanates. May produce an allergic reaction.

2.3. Other hazards

Not Classified as PBT/vPvB by current EU criteria.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

METHYLENEDIPHENYL DIISOCYANATE **30-60%**

CAS-No.: 26447-40-5 **EC No.: 247-714-0**

Classification (EC 1272/2008)	Classification (67/548/EEC)
Acute Tox. 4 - H332	Carc. Cat. 3;R40
Skin Irrit. 2 - H315	Xn;R20,R48/20
Eye Irrit. 2 - H319	Xi;R36/37/38
Resp. Sens. 1 - H334	R42/43
Skin Sens. 1 - H317	
Carc. 2 - H351	
STOT SE 3 - H335	
STOT RE 2 - H373	

tris(2-chloro-1-methylethyl)phosphate **10-30%**

CAS-No.: 13674-84-5 **EC No.: 237-158-7**

Classification (EC 1272/2008)	Classification (67/548/EEC)
Not classified.	R52/53.

DIMETHYL ETHER		5-10%
CAS-No.: 115-10-6	EC No.: 204-065-8	
Classification (EC 1272/2008) Flam. Gas 1 - H220	Classification (67/548/EEC) F+;R12	

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. Provide fresh air, warmth and rest, preferably in a comfortable upright sitting position. Get medical attention if any discomfort continues. If respiratory problems, artificial respiration/oxygen. Be aware that symptoms of lung oedema (shortness of breath) may develop up to 24 hours after exposure. Immediately call an ambulance.

Ingestion

DO NOT INDUCE VOMITING! Immediately rinse mouth and provide fresh air. Get medical attention immediately!

Skin contact

Remove affected person from source of contamination. Immediately remove contaminated clothing. Wash the skin immediately with soap and water. Get medical attention promptly if symptoms occur after washing.

Eye contact

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

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

Inhalation

May cause an asthma-like shortness of breath.

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

Treat Symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

Fire can be extinguished using: Water spray, fog or mist. Foam. Powder.

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

Fire causes formation of toxic gases. Aerosol cans may explode in a fire.

Specific hazards

Fire creates: Irritating gases/vapours/fumes of: Hydrogen cyanide (HCN). Nitrous gases (NOx).

5.3. Advice for firefighters

Special Fire Fighting Procedures

Avoid breathing fire vapours. Use pressurised air mask if product is involved in a fire.

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

When dealing with a spillage, please consult the section relating to suitable protective measures. Wear necessary protective equipment. Stop leak if possible without risk. Flush with plenty of water to clean spillage area. Do not contaminate water sources or sewer.

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. For waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Persons with impaired lung functions should not handle this preparation. Persons susceptible to allergic reactions should not handle this product. Avoid forming spray/aerosol mists. Avoid inhalation of vapours/spray and contact with skin and eyes. Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level. Use mechanical ventilation in case of handling which causes formation of vapours. Spraying is permitted only in closed systems, spray cabinets or spray boxes with adequate ventilation. Eye wash facilities and emergency shower must be available when handling this product.

7.2. Conditions for safe storage, including any incompatibilities

Keep in original container. Store in tightly closed original container in a dry, cool and well-ventilated place. Keep away from heat, sparks and open flame.

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
DIMETHYL ETHER	WEL	400 ppm	766 mg/m3	500 ppm	958 mg/m3	
METHYLENEDIPHENYL DIISOCYANATE	WEL		0.02 mg/m3(Sen)		0.07 mg/m3(Sen)	

WEL = Workplace Exposure Limit.

Ingredient Comments

WEL = Workplace Exposure Limits

8.2. Exposure controls

Protective equipment

Process conditions

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

Engineering measures

Provide sufficient ventilation during operations which cause vapour formation. Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

Respiratory equipment

Respiratory protection must be used if air contamination exceeds acceptable level. It is recommended to use respiratory equipment with combination filter, type A2/P2. EN14387 When spraying use suitable air-supplied respirator.

Hand protection

Use protective gloves made of: Rubber, neoprene or PVC. 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 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

DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Wash promptly if skin becomes contaminated. When using do not eat, drink or smoke.

Environmental Exposure Controls

Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Aerosol.
Odour	Musty (mouldy).
Solubility	Insoluble in water
Relative density	1.09 @ 25 °c
Viscosity	mPas @ 20 C

9.2. Other information

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Reacts strongly with strong acids, bases, organic chemicals and certain metal combinations.

10.2. Chemical stability

Stable under normal temperature conditions.

10.3. Possibility of hazardous reactions

Hazardous Polymerisation

Will not polymerise.

10.4. Conditions to avoid

Avoid heat, flames and other sources of ignition. Reacts strongly with strong acids, bases, organic chemicals and certain metal combinations.

10.5. Incompatible materials

Materials To Avoid

Water, steam, water mixtures. Strong acids.

10.6. Hazardous decomposition products

High temperatures generate: Toxic gases/vapours/fumes of: Carbon dioxide (CO2). Carbon monoxide (CO). Hydrogen cyanide (HCN).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Toxic Dose 1 - LD 50

>10000 mg/kg (oral rat)

Toxic Conc. - LC 50

490 mg/l/4h (inh-rat)

Other Health Effects

Carcinogen Category 3.

General information

No specific health warnings noted.

Inhalation

Harmful by inhalation. High concentrations of vapours may irritate respiratory system and lead to headache, fatigue, nausea and vomiting. May cause sensitisation by inhalation.

Ingestion

May cause stomach pain or vomiting.

Skin contact

Irritating to skin. Prolonged or repeated exposure may cause severe irritation.

Eye contact

Irritating to eyes.

Toxicological information on ingredients.

METHYLENEDIPHENYL DIISOCYANATE (CAS: 26447-40-5)

Toxic Dose 1 - LD 50

5000 mg/kg (oral rat)

Toxic Dose 2 - LD 50

5000 mg/kg (ipr-rat)

Toxic Conc. - LC 50

370 mg/l/4h (inh-rat)

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Dangerous for the environment if discharged into watercourses.

12.1. Toxicity

LC 50, 96 Hrs, Fish mg/l >1000

Acute Toxicity - Fish

LC0 96 hours > 1000 mg/l

EC 50, 48 Hrs, Daphnia, mg/l >500

Acute Toxicity - Aquatic Invertebrates

EC0 > 500 mg/l Daphnia magna

Acute Toxicity - Aquatic Plants

EC0 72 hours 1640 mg/l Scenedesmus subspicatus

Ecological information on ingredients.

METHYLENEDIPHENYL DIISOCYANATE (CAS: 26447-40-5)

LC 50, 96 Hrs, Fish mg/l

100

EC 50, 48 Hrs, Daphnia, mg/l

100

12.2. Persistence and degradability

Degradability

The product is not readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential

The product does not contain any substances expected to be bioaccumulating.

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

No information required.

SECTION 13: DISPOSAL CONSIDERATIONS

General information

Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.

13.1. Waste treatment methods

Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

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

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

No.

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

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.

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	3
SDS No.	11312

Risk Phrases In Full

R12	Extremely flammable.
R20	Harmful by inhalation.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R36/37/38	Irritating to eyes, respiratory system and skin.
R40	Limited evidence of a carcinogenic effect.
R42/43	May cause sensitisation by inhalation and skin contact.

Hazard Statements In Full

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs <<Organs>> through prolonged or repeated exposure.