SAFETY DATA SHEET
FLAME RETARDANT EPOXY ER2188 PART A

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

1.1. Product identifier

Product name
ER2188A
EER2188AB25K
EER2188K1K
EER2188K5K
EER2188K10K
EER2188K25K
EER2188RP100G
EER2188RP100GF
EER2188RP250G
EER2188RP250GE
EER2188RP250GF
EER2188RP500GF
EER2188RP1000G
EER2188RP1000GF
ZE

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

Identified uses
Resin.

Uses advised against
No specific uses advised against are identified.

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) 1420 85848 between 08.30 - 17.00 Monday to Thursday and 08.30 - 12.30 Friday

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (1999/45/EEC)
Xi;R36/38. R43. R52/53.

2.2. Label elements

Contains
EPOXY RESIN (Number average MW <= 700)
Neodecanoic acid glycidyl ester

Labelling

Irritant
FLAME RETARDANT EPOXY ER2188 PART A

Risk Phrases

R43 May cause sensitisation by skin contact.
R36/38 Irritating to eyes and skin.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S37 Wear suitable gloves.
S24/25 Avoid contact with skin and eyes.
P5 Contains epoxy constituents. See information supplied by the manufacturer.

2.3. Other hazards

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

| EPOXY RESIN (Number average MW <= 700 ) | 10-30% |
| CAS-No.: 25068-38-6 | EC No.: 500-033-5 |

| Classification (EC 1272/2008) | Classification (67/548/EEC) |
| Skin Irrit. 2 - H315 | R43 |
| Eye Irrit. 2 - H319 | Xi;R36/38 |
| Skin Sens. 1 - H317 | N;R51/53 |
| Aquatic Chronic 2 - H411 |

| Neodecanoic acid glycidyl ester | 1-5% |
| CAS-No.: 26761-45-5 | EC No.: 247-979-2 |

| Classification (EC 1272/2008) | Classification (67/548/EEC) |
| Skin Sens. 1 - H317 | N;R51/53. |
| Aquatic Chronic 2 - H411 | R43. |

| Formaldehyde, polymer with 1,3 dimethylbenzene | 1-5% |
| CAS-No.: 26139-75-3 | EC No.: |

| Classification (EC 1272/2008) | Classification (67/548/EEC) |
| Not classified. | Xi;R36/38,R37. |

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.

Ingestion

DO NOT INDUCE VOMITING! Rinse mouth thoroughly. Promptly get affected person to drink large volumes of water to dilute the swallowed chemical. Get medical attention immediately!

Skin contact

Rinse the skin immediately with lots of water. Get medical attention if any discomfort continues.
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Eye contact
Remove victim immediately from source of exposure. 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 and get medical attention.

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
Fire can be extinguished using: Foam. Alcohol resistant foam. Dry chemicals, sand, dolomite etc.

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
No unusual fire or explosion hazards noted.

5.3. Advice for firefighters
Special Fire Fighting Procedures
Use water to keep fire exposed containers cool and disperse vapours.

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. Wear necessary protective equipment. Wash thoroughly after dealing with a spillage.

6.4. Reference to other sections
Wear protective clothing as described in Section 8 of this safety data sheet.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling
Avoid spilling, skin and eye contact. Keep away from heat, sparks and open flame.

7.2. Conditions for safe storage, including any incompatibilities
Store in tightly closed original container in a dry, cool and well-ventilated place. Keep in original container.

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
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 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. It is recommended to use respiratory equipment with combination filter, type A2/P2. EN14387

Hand protection
Use suitable protective gloves if risk of skin contact. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. Chemical resistant gloves required for prolonged or repeated contact. Neoprene, nitrile, polyethylene or PVC. Gloves should conform to EN374

Eye protection
Wear approved, tight fitting safety glasses where splashing is probable. EN166

Other Protection
Wear appropriate clothing to prevent any possibility of skin 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. Wash promptly if skin becomes wet or contaminated. When using do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Viscous liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Black</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>&gt;200 (&gt;392 F)</td>
</tr>
<tr>
<td>Relative density</td>
<td>&gt;=1.830 @ 20 °C (68 °F)</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>0.013 kPa @ 20 °C (68 °F)</td>
</tr>
<tr>
<td>Viscosity</td>
<td>150,000 cps @ 23 °C (73 °F)</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt;200 (392 °F) CC (Closed cup)</td>
</tr>
</tbody>
</table>

9.2. Other information

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.

10.4. Conditions to avoid
Avoid contact with acids and oxidising substances.

10.5. Incompatible materials

Materials To Avoid

10.6. Hazardous decomposition products

SECTION 11: TOXICOLOGICAL INFORMATION
11.1. Information on toxicological effects

**Inhalation**
No specific health warnings noted.

**Ingestion**
May cause stomach pain or vomiting.

**Skin contact**
Irritating to skin. May cause allergic contact eczema. May cause sensitisation by skin contact.

**Eye contact**
Irritating to eyes.

**Route of entry**
Ingestion. Skin and/or eye contact.

*Toxicological information on ingredients.*

**EPOXY RESIN (Number average MW <= 700 ) (CAS: 25068-38-6)**

*Toxic Dose 1 - LD 50*  
>5000 mg/kg (oral rat)

*Toxic Dose 2 - LD 50*  
>20000 mg/kg (oral rat)

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**SECTION 12: ECOLOGICAL INFORMATION**

**Ecotoxicity**
Dangerous for the environment if discharged into watercourses.

**12.1. Toxicity**

<table>
<thead>
<tr>
<th>Test</th>
<th>Value (mg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC 50, 96 Hrs, Fish</td>
<td>1.2</td>
</tr>
<tr>
<td>EC 50, 48 Hrs, Daphnia</td>
<td>2.7</td>
</tr>
<tr>
<td>IC 50, 72 Hrs, Algae</td>
<td>9.4</td>
</tr>
</tbody>
</table>

*Ecological information on ingredients.*

**EPOXY RESIN (Number average MW <= 700 ) (CAS: 25068-38-6)**

<table>
<thead>
<tr>
<th>Test</th>
<th>Value (mg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC 50, 96 Hrs, Fish</td>
<td>3.1</td>
</tr>
<tr>
<td>EC 50, 48 Hrs, Daphnia</td>
<td>1.4 - 1.7</td>
</tr>
<tr>
<td>IC 50, 72 Hrs, Algae</td>
<td>220</td>
</tr>
</tbody>
</table>

**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**

**12.5. Results of PBT and vPvB assessment**

This product does not contain any PBT or vPvB substances.

**12.6. Other adverse effects**

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**SECTION 13: DISPOSAL CONSIDERATIONS**
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General information
Waste to be treated as controlled waste. Disposal to licensed waste disposal site in accordance with local Waste Disposal Authority.

13.1. Waste treatment methods
Dispose of waste and residues in accordance with local authority requirements.

SECTION 14: TRANSPORT INFORMATION

General
The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

Road Transport Notes
Not Classified

Rail Transport Notes
Not classified.

Sea Transport Notes
Not classified.

Air Transport Notes
Not classified.

14.1. UN number
Not applicable.

14.2. UN proper shipping name
Not applicable.

14.3. Transport hazard class(es)
ADR/RID/ADN Class
Not classified for transportation.

Transport Labels
No transport warning sign required.

14.4. Packing group
Not applicable.

14.5. Environmental hazards
Environmentally Hazardous Substance/Marine Pollutant
No.

14.6. Special precautions for user
Not applicable.

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

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
Dangerous Substance Directive 67/548/EEC.
Dangerous Preparations Directive 1999/45/EC.
System of specific information relating to Dangerous Preparations. 2001/58/EC.
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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

Issued By Helen O'Reilly

Revision Date JULY 2012

Revision 4

SDS No. 11484

Risk Phrases In Full
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R36/38 Irritating to eyes and skin.
R37 Irritating to respiratory system.
R43 May cause sensitisation by skin contact.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Hazard Statements In Full
H319 Causes serious eye irritation.
H315 Causes skin irritation.
H412 Harmful to aquatic life with long lasting effects.
H317 May cause an allergic skin reaction.
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.