

SAFETY DATA SHEET
THERMALLY CONDUCTIVE EPOXY 2220B

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

1.1. Product identifier

Product name THERMALLY CONDUCTIVE EPOXY 2220B
Product No. ER2220B

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 Mon – Fri

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical and Chemical Hazards	Not classified.
Human health	Acute Tox. 4 - H302; Acute Tox. 4 - H312; Skin Corr. 1B - H314; Skin Sens. 1 - H317
Environment	Aquatic Chronic 3 - H412

Classification (1999/45/EEC) Xn; R21/22. C; R34. R43. R52/53.

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

Environment

Harmful 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. Use appropriate containment to avoid environmental contamination. Avoid release to the environment. Refer to special instructions/safety data sheets. Dispose of waste and residues in accordance with local authority requirements.

2.2. Label elements

Contains ISOPHORONEDIAMINE

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



THERMALLY CONDUCTIVE EPOXY 2220B

Signal Word Danger

Hazard Statements

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.

Precautionary Statements

P280	Wear protective gloves/protective clothing/eye protection/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. Immediately call a POISON CENTER or doctor/physician.
P310	

Supplementary Precautionary Statements

P273	Avoid release to the environment.
P261	Avoid breathing vapour/spray.
P405	Store locked up.

2.3. Other hazards**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.2. Mixtures**

ISOPHORONEDIAMINE	80-100%
CAS-No.: 2855-13-2	EC No.: 220-666-8
Classification (EC 1272/2008) Acute Tox. 4 - H302 Acute Tox. 4 - H312 Skin Corr. 1B - H314 Skin Sens. 1 - H317 Aquatic Chronic 3 - H412	Classification (67/548/EEC) C;R34 Xn;R21/22 R43 R52/53
Salicylic acid	1-5%
CAS-No.: 69-72-7	EC No.: 200-712-3
Classification (EC 1272/2008) Not classified.	Classification (67/548/EEC) Xn;R22. Xi;R36.

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. Get medical attention. Provide rest, warmth and fresh air.

Ingestion

DO NOT INDUCE VOMITING! Rinse mouth thoroughly. Drink plenty of water. Get medical attention immediately!

Skin contact

Wash the skin immediately with soap and water. Get medical attention promptly if symptoms occur after washing.

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. Get medical attention immediately. Continue to rinse.

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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 fire-extinguishing media appropriate for surrounding materials. Fire can be extinguished using: Foam. Alcohol resistant foam. Carbon dioxide (CO₂).

Unsuitable extinguishing media

DO NOT use water if avoidable.

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.

Specific hazards

Fire creates: Toxic gases/vapours/fumes of: Carbon monoxide (CO). Carbon dioxide (CO₂). Ammonia or amines. Nitrous gases (NO_x).

5.3. Advice for firefighters

Special Fire Fighting Procedures

No specific fire fighting procedure given.

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

DO NOT touch spilled material. Absorb in vermiculite, dry sand or earth and place into containers. Flush with plenty of water to clean spillage area. Do not contaminate water sources or sewer. Clean-up personnel should use respiratory and/or liquid contact protection.

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. Collect and dispose of spillage as indicated in section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Avoid spilling, skin and eye contact. Avoid inhalation of vapours.

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.

Storage Class

Corrosive storage.

7.3. Specific end use(s)

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

THERMALLY CONDUCTIVE EPOXY 2220B

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

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

In case of inadequate ventilation and work of brief duration, use suitable respiratory equipment. It is recommended to use respiratory equipment with combination filter, type A2/P2. EN14387

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. Nitrile gloves are recommended. Gloves should conform to EN374

Eye protection

Use approved safety goggles or face shield. 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 with soap & water if skin becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Liquid
Colour	Black.
Solubility	Miscible with water
Initial boiling point and boiling range (°C)	247 (476.6 F)
Relative density	0.930 @ 20 °C (68 F)
Viscosity	25 mPas @ 23C
Flash point (°C)	112 (233.6 F) CC (Closed cup).
Auto Ignition Temperature (°C)	380 (716 F)
Flammability Limit - Lower(%)	1.2

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.

THERMALLY CONDUCTIVE EPOXY 2220B**Hazardous Polymerisation**

Will not polymerise.

10.4. Conditions to avoid

Avoid contact with strong oxidisers.

10.5. Incompatible materials**Materials To Avoid**

Strong acids. Strong alkalis. Strong oxidising substances.

10.6. Hazardous decomposition products

Fire creates: Toxic gases/vapours/fumes of: Carbon monoxide (CO). Carbon dioxide (CO₂). Ammonia or amines.

SECTION 11: TOXICOLOGICAL INFORMATION**11.1. Information on toxicological effects****Inhalation**

Harmful by inhalation. Irritating to respiratory system.

Ingestion

Harmful if swallowed.

Skin contact

Causes burns. May cause sensitisation by skin contact. Product has a defatting effect on skin. Prolonged contact may cause dryness of the skin. May cause allergic contact eczema.

Eye contact

Spray and vapour in the eyes may cause irritation and smarting. May cause chemical eye burns.

Health Warnings

Prolonged inhalation of high concentrations may damage respiratory system.

Toxicological information on ingredients.**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

ISOPHORONEDIAMINE (CAS: 2855-13-2)**Salicylic acid (CAS: 69-72-7)**

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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. ToxicityEcological 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 degradabilityEcological information on ingredients.XYLENE (CAS: 1330-20-7)**Degradability**

The product is biodegradable.

12.3. Bioaccumulative potentialEcological information on ingredients.XYLENE (CAS: 1330-20-7)**Bioaccumulation factor**

BCF 25.9

Partition coefficient

3.2

12.4. Mobility in soilEcological 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 effectsEcological information on ingredients.XYLENE (CAS: 1330-20-7)

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

THERMALLY CONDUCTIVE EPOXY 2220B**13.1. Waste treatment methods**

Dispose of waste and residues in accordance with local authority requirements.

SECTION 14: TRANSPORT INFORMATION
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14.1. UN number

UN No. (ADR/RID/ADN)	2289
UN No. (IMDG)	2289
UN No. (ICAO)	2289

14.2. UN proper shipping name

Proper Shipping Name	ISOPHORONEDIAMINE
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14.3. Transport hazard class(es)

ADR/RID/ADN Class	8
ADR/RID/ADN Class	Class 8: Corrosive substances.
ADR Label No.	8
IMDG Class	8
ICAO Class/Division	8
Transport Labels	

**14.4. Packing group**

ADR/RID/ADN Packing group	III
IMDG Packing group	III
ICAO Packing group	III

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant
No.

14.6. Special precautions for user

EMS	F-A, S-B
Emergency Action Code	2X
Hazard No. (ADR)	80

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**Uk Regulatory References**

Chemicals (Hazard Information & Packaging) Regulations.

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

THERMALLY CONDUCTIVE EPOXY 2220B**Environmental Listing**

Control of Pollution Act 1974. Control of Pollution (Special Waste Regulations) Act 1980. Rivers (Prevention of Pollution) Act 1961.

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

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.

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**

Issued By	Helen O'Reilly
Revision Date	AUGUST 2013
Revision	1
SDS No.	13393
Risk Phrases In Full	
R34	Causes burns.
R22	Harmful if swallowed.
R21/22	Harmful in contact with skin and if swallowed.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R36	Irritating to eyes.
R43	May cause sensitisation by skin contact.
Hazard Statements In Full	
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H412	Harmful 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.

SAFETY DATA SHEET
THERMALLY CONDUCTIVE EPOXY 2220A

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

1.1. Product identifier

Product name THERMALLY CONDUCTIVE EPOXY 2220A
Product No. ER2220A

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	Not classified.
Human health	Skin Irrit. 2 - H315; Eye Irrit. 2 - H319; Skin Sens. 1 - H317
Environment	Aquatic Acute 1 - H400; Aquatic Chronic 1 - H410

Classification (1999/45/EEC)

Xi; R36/38. R43. N; R50/53.

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

2.2. Label elements

Contains NEOPENTYL GLYCOL DIGLYCIDYL ETHER
EPOXY RESIN (Number average MW <= 700)
EPOXY PHENOL NOVOLAC RESIN

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



Signal Word

Warning

Hazard Statements

H315

Causes skin irritation.

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	H317	May cause an allergic skin reaction.
	H319	Causes serious eye irritation.
	H410	Very toxic to aquatic life with long lasting effects.
Precautionary Statements		
	P273	Avoid release to the environment.
	P280	Wear protective gloves/protective clothing/eye protection/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.
Supplementary Precautionary Statements		
	P261	Avoid breathing vapour/spray.
	P333+313	If skin irritation or rash occurs: Get medical advice/attention.
Supplemental label information		
	EUH205	Contains epoxy constituents. May produce an allergic reaction.

2.3. Other hazards**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.2. Mixtures**

ZINC OXIDE	30-60%
CAS-No.: 1314-13-2	EC No.: 215-222-5
Classification (EC 1272/2008) Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	Classification (67/548/EEC) N;R50/53
NEOPENTYL GLYCOL DIGLYCIDYL ETHER	5-10%
CAS-No.: 17557-23-2	EC No.: 241-536-7
Classification (EC 1272/2008) Not classified.	Classification (67/548/EEC) Xi;R38. R43.
EPOXY RESIN (Number average MW <= 700)	5-10%
CAS-No.: 25068-38-6	EC No.: 500-033-5
Classification (EC 1272/2008) Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317 Aquatic Chronic 2 - H411	Classification (67/548/EEC) R43 Xi;R36/38 N;R51/53
EPOXY PHENOL NOVOLAC RESIN	1-5%
CAS-No.: 28064-14-4	EC No.:
Classification (EC 1272/2008) Not classified.	Classification (67/548/EEC) Xi;R36/38. N;R51/53. R43.

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

THERMALLY CONDUCTIVE EPOXY 2220A

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.

Ingestion

DO NOT INDUCE VOMITING! Get medical attention immediately! Rinse nose, mouth and throat with water.

Skin contact

Remove affected person from source of contamination. Rinse the skin immediately with lots of water. Get medical attention promptly if symptoms occur after washing.

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 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

Keep combustibles away from spilled material. Stop leak if possible without risk. DO NOT touch spilled material! Wear necessary protective equipment. Absorb in vermiculite, dry sand or earth and place into containers. 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. 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

THERMALLY CONDUCTIVE EPOXY 2220A

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**

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
ZINC OXIDE	WEL		5 mg/m3		10 mg/m3	

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. Wash promptly if skin becomes wet or contaminated. Promptly remove any clothing that becomes contaminated.

When using do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties**

Appearance	Viscous Liquid
Colour	Grey.
Solubility	Insoluble in water
Relative density	2.38 @ 20 C
Viscosity	95000 mPas @ 20 C

9.2. Other information**SECTION 10: STABILITY AND REACTIVITY**

THERMALLY CONDUCTIVE EPOXY 2220A**10.1. Reactivity**

There are no known 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 contact with acids and oxidising substances.

10.5. Incompatible materials**Materials To Avoid**

Strong oxidising substances.

10.6. Hazardous decomposition products

Fire creates: Vapours/gases/fumes of: Carbon monoxide (CO). Carbon dioxide (CO₂). Nitrous gases (NO_x).

SECTION 11: TOXICOLOGICAL INFORMATION**11.1. Information on toxicological effects****Inhalation**

May cause irritation to the respiratory system.

Ingestion

May cause discomfort if swallowed. May cause stomach pain or vomiting.

Skin contact

Irritating to skin. May cause sensitisation by skin contact. May cause allergic contact eczema. Prolonged contact may cause dryness of the skin. Acts as a defatting agent on skin. May cause cracking of skin, and eczema.

Eye contact

Irritating to eyes. May cause chemical eye burns.

Health Warnings

Preparation contains an epoxy resin, which may cause sensitisation and development of allergy.

Route of entry

Inhalation. 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)

NEOPENTYL GLYCOL DIGLYCIDYL ETHER (CAS: 17557-23-2)**Toxic Dose 1 - LD 50**

>2000 mg/kg (oral rat)

EPOXY PHENOL NOVOLAC RESIN (CAS: 28064-14-4)**Toxic Dose 1 - LD 50**

>2000 mg/kg (oral rat)

SECTION 12: ECOLOGICAL INFORMATION**Ecotoxicity**

Dangerous for the environment if discharged into watercourses.

THERMALLY CONDUCTIVE EPOXY 2220A

12.1. ToxicityEcological information on ingredients.**EPOXY RESIN (Number average MW <= 700) (CAS: 25068-38-6)**

LC 50, 96 Hrs, Fish mg/l

3.1

EC 50, 48 Hrs, Daphnia, mg/l

1.4-1.7

IC 50, 72 Hrs, Algae, mg/l

220

12.2. Persistence and degradability**Degradability**

The product is not readily biodegradable.

12.3. Bioaccumulative potential**Bioaccumulative potential**

No data available on bioaccumulation.

12.4. Mobility in soil**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.

12.6. Other adverse effects**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

Dispose of waste and residues in accordance with local authority requirements.

SECTION 14: TRANSPORT INFORMATION**14.1. UN number**

UN No. (ADR/RID/ADN) 3082

UN No. (IMDG) 3082

UN No. (ICAO) 3082

14.2. UN proper shipping name

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ZINC OXIDE, EPOXY PHENOL NOVOLAC RESIN)
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14.3. Transport hazard class(es)

ADR/RID/ADN Class 9

ADR/RID/ADN Class Class 9: Miscellaneous dangerous substances and articles.

ADR Label No. 9

IMDG Class 9

ICAO Class/Division 9

Transport Labels

THERMALLY CONDUCTIVE EPOXY 2220A

**14.4. Packing group**

ADR/RID/ADN Packing group	III
IMDG Packing group	III
ICAO Packing group	III

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant

**14.6. Special precautions for user**

EMS	F-A, S-F
Emergency Action Code	•3Z
Hazard No. (ADR)	90
Tunnel Restriction Code	(E)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

No information required.

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.

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

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.

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

THERMALLY CONDUCTIVE EPOXY 2220A

No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

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Revision	1
Risk Phrases In Full	
R36/38	Irritating to eyes and skin.
R38	Irritating to skin.
R43	May cause sensitisation by skin contact.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Hazard Statements In Full	
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
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.