SAFETY DATA SHEET

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SAFETY DATA SHEET ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830

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

1.1 Product identifier

Product Name	QA-500 Part A
CAS No.	Mixture
EINECS No.	Mixture
REACH Registration No.	None assigned.

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

Identified Use(s)	Adhesives
Uses Advised Against	None known.

1.3 Details of the supplier of the safety data sheet

Company Identification	VISHAY MEASUREMENTS GROUP UK LTD Stroudley Road Basingstoke Hampshire RG24 8FW United Kingdom
Telephone	+44 (0) 1256 462131
Fax	+44 (0) 1256 471441
E-Mail (competent person)	mm.uk@vishaypg.com

1.4 Emergency telephone number (00-1) 703-527-3887 – CHEMTREC
Languages spoken 24 hours, English spoken

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1 Regulation (EC) No. 1272/2008 (CLP)

Skin Irrit. 2; H315
Skin Sens. 1; H317
Eye Irrit. 2; H319
Aquatic Chronic 2; H411

2.2 Label elements According to Regulation (EC) No. 1272/2008 (CLP)
Product Name QA-500 Part A

Hazard Pictogram(s)

Signal Word(s) WARNING

Contains: Reaction product: Bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

Hazard Statement(s)
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H411: Toxic to aquatic life with long lasting effects.

Precautionary Statement(s)
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352: IF ON SKIN: Wash with plenty of water.
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical advice/attention.
P273: Avoid release to the environment.

Additional Information None

2.3 Other hazards Molten material will adhere to the skin causing deep thermal burns.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances Not applicable

3.2 Mixtures Substances in preparations / mixtures

EC Classification Regulation (EC) No. 1272/2008 (CLP)

Chemical identity of the substance	%W/W	CAS No.	EC No.	REACH Registration No.	Hazard classification
Reaction product: Bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)	70 - 100	25068-38-6	500-033-5	Not yet assigned in the supply chain	Skin Irrit. 2; H315 (SCL: ≥ 5%) Skin Sens. 1; H317 Eye Irrit. 2; H319 (SCL: ≥ 5%) Aquatic Chronic 2; H411
Phenyl Glycidyl Ether^	< 0.001	122-60-1	204-557-2	Not yet assigned in the supply chain	Not classified

For full text of H/P Statements see section 16. ^Substance with a community exposure limit

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Self-protection of the first aider: Wear suitable protective clothing, gloves and eye/face protection. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Contaminated clothing should be laundered before reuse.

Inhalation: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is laboured, oxygen should be administered by qualified personnel. If symptoms develop, obtain medical attention.

Skin Contact: IF ON SKIN: Remove contaminated clothing immediately and drench affected skin with plenty of water, then wash with soap and water. Contaminated clothing should be thoroughly cleaned. If skin irritation or rash occurs: Get medical advice/attention.

Hot/molten product: In case of burns immediately cool affected skin as long as possible with cold water. In the event of burns from the molten liquid, do not attempt to remove adhering material. Do not apply greases or ointments. Cover the affected area with a sterile dressing or clean sheeting and transport for medical care.

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if eye irritation develops or persists.

If hot product is splashed into the eye, it should be cooled immediately to dissipate heat, under cold running water. Obtain medical attention.

Ingestion: IF SWALLOWED: Rinse mouth. Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration into the lungs. Do

		not give anything by mouth to an unconscious person. If symptoms develop, obtain medical attention.
4.2	**Most important symptoms and effects, both acute and delayed**	Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Hot/molten product: May cause burns to skin and eyes.
4.3	**Indication of any immediate medical attention and special treatment needed**	Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1	**Extinguishing media**	
	Suitable Extinguishing media	As appropriate for surrounding fire. Extinguish with carbon dioxide, dry chemical, foam or waterspray. Alcohol resistant foams (ATC type) are preferred.
	Unsuitable extinguishing media	Do not use water jet. Direct water jet may spread the fire.
5.2	**Special hazards arising from the substance or mixture**	May decompose in a fire giving off toxic fumes. Carbon monoxide, carbon dioxide and halogenated compounds.
5.3	**Advice for fire-fighters**	Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. Do not direct jets of foam or water on the spilled molten product, as this may cause splattering. Avoid run off to waterways and sewers.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1	**Personal precautions, protective equipment and emergency procedures**	Ensure adequate ventilation. Stop leak if safe to do so. Eliminate all ignition sources if safe to do so. Avoid breathing vapours. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. See Section: 8.
6.2	**Environmental precautions**	Avoid release to the environment. Do not allow to enter drains, sewers or watercourses. Spillages or uncontrolled discharges into watercourses must be alerted to the Environment Agency or other appropriate regulatory body.
6.3	**Methods and material for containment and cleaning up**	Stop leak if safe to do so. Ensure suitable personal protection during removal of spillages. Small spillages: Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a lidded container for disposal or recovery. Large spillages: Stay upwind/keep distance from source. Adsorb spillages onto sand, earth or any suitable adsorbent material. Dispose of this material and its container as hazardous waste. Ventilate the area and wash spill site after material pick-up is complete.
6.4	**Reference to other sections**	See Section: 8, 13

SECTION 7: HANDLING AND STORAGE

7.1	**Precautions for safe handling**	Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid breathing vapours. Avoid contact with heated or molten product. Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Hot/molten product: Avoid contact with moisture.
7.2	**Conditions for safe storage, including any incompatibilities**	Store in a well-ventilated place. Keep container tightly closed. Keep away from heat, sources of ignition and direct sunlight. Opened containers should be carefully resealed and stored in an upright position.
	Storage temperature	Ambient.
	Storage life	Stable under normal conditions.
	Incompatible materials	Keep away from: Acids and strong bases, Strong oxidising agents. Reaction with some curing agents may produce considerable heat. Hot/molten product: Avoid contact with moisture.
7.3	**Specific end use(s)**	See Section: 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational Exposure Limits

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note
Phenyl Glycidyl Ether	1344-28-1	1	6.2	-	-	WEL

Note: WEL: Workplace Exposure Limit (UK HSE EH40)

8.1.2 Biological limit value Not established.

8.1.3 PNECs and DNELs Phenyl Glycidyl Ether: A DNEL cannot be derived

Phenyl Glycidyl Ether Predicted No Effect Concentration	Value
Aquatic Compartment	PNEC Aqua (marine water) 0.004 mg/l PNEC Aqua (freshwater) 0.043 mg/l PNEC freshwater sediment 0.331 mg/kg dw PNEC marine sediment 0.033 mg/kg dw
Soil	PNEC 0.041 Soil mg/kg dw

8.2 Exposure controls

8.2.1 Appropriate engineering controls Ensure adequate ventilation or use appropriate containment. Atmospheric levels should be controlled in compliance with the occupational exposure limit.

8.2.2 Individual protection measures, such as personal protective equipment (PPE) General hygiene measures for the handling of chemicals are applicable. Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier. Avoid contact with skin, eyes or clothing. Avoid breathing vapours. Wash hands before breaks and after work. Keep work clothes separately. Contaminated clothing should be thoroughly cleaned. Contaminated leather articles should be discarded (e.g. shoes). Do not eat, drink or smoke at the work place.

Eye/ face protection

Wear protective eye glasses for protection against liquid splashes. Wear eye protection with side protection. Have available eyewash bottle with clean water.

Skin protection

Hand protection: Wear impervious gloves (EN374). Gloves should be changed regularly to avoid permeation problems. The gloves type used must be chosen based on the work activity and duration as well as concentration/quantity of material being handled.

Body protection: Wear impervious protective clothing, including boots, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection

Use only in well-ventilated areas. In case of inadequate ventilation wear respiratory protection. Open system(s): Wear suitable respiratory protective equipment.
Recommended: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard.

Thermal hazards When dealing with heated material: Wear appropriate personal protective equipment, avoid direct contact.

8.2.3 Environmental Exposure Controls — Avoid release to the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Clear viscous liquid
Odour	Not available.
Odour threshold	Not available.
pH	Not established.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	>260°C (>500°F)
Flash point	251°C (484°F) [Closed cup]
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable - Liquid.
Upper/lower flammability or explosive limits	Not available.
Vapour pressure	0.03 @ 77°C (171°F)
Vapour density	Not available.
Relative density	1.17 (H_2O = 1)
Solubility(ies)	The product is essentially insoluble in water.
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	Not available.
Decomposition Temperature	Not available.
Viscosity	Not available.
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.

9.2 Other information — None.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity — Stable under normal conditions.

10.2 Chemical stability — Stable under normal conditions.

10.3 Possibility of hazardous reactions — Reaction with some curing agents may produce considerable heat. Can react vigorously with strong Lewis or mineral acids and strong mineral and organic bases, especially primary and secondary aliphatic amines. Hot/molten product: Avoid contact with moisture.

10.4 Conditions to avoid — Keep away from heat, sources of ignition and direct sunlight.

10.5 Incompatible materials — Keep away from: Acids and strong bases, Strong oxidising agents. Hot/molten product: Avoid contact with moisture.

10.6 Hazardous decomposition product(s) — May decompose in a fire giving off toxic fumes. Carbon monoxide, carbon dioxide and halogenated compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects (Substances in preparations / mixtures)

Acute toxicity

Ingestion	Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LC50 > 2000 mg/kg bw/day.
Inhalation	Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LC50 > 20.0 mg/l.
Skin Contact	Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LC50 > 2000 mg/kg bw/day.
Skin corrosion/irritation	Skin Irrit. 2: Causes skin irritation.
Reaction product: Bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)	Skin Irrit. 2; H315 Harmonised Classification
	No data
Phenyl Glycidyl Ether	Skin Irrit. 2; H315 Harmonised Classification

	Irritating to skin. (rabbit) (OECD 404)
Serious eye damage/irritation	Eye Irrit. 2: Causes serious eye irritation.
Reaction product: Bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)	Eye Irrit. 2; H319 Harmonised Classification No data
Respiratory or skin sensitization	Skin Sens. 1: May cause an allergic skin reaction.
Reaction product: Bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)	Skin Sens. 1; H317 Harmonised Classification No data
Phenyl Glycidyl Ether	Skin Sens. 1; H317 Harmonised Classification Skin sensitization: Positive Guinea pig (OECD 406)
Germ cell mutagenicity	Based upon the available data, the classification criteria are not met.
Carcinogenicity	Based upon the available data, the classification criteria are not met.
Reproductive toxicity	Based upon the available data, the classification criteria are not met.
STOT - single exposure	Based upon the available data, the classification criteria are not met.
STOT - repeated exposure	Based upon the available data, the classification criteria are not met.
Aspiration hazard	Based upon the available data, the classification criteria are not met.

11.2 Other information None.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecotoxicity	Aquatic Chronic 2: Toxic to aquatic life with long lasting effects. Estimated Mixture LC50 > 1 ≤ 10 mg/l (Fish)
Reaction product: Bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)	Aq. Chronic 2; H411 Harmonised Classification No data
Phenyl Glycidyl Ether	Aq. Chronic 3; H412 Harmonised Classification LC50 (fish) mg/l: 43 (96 hour) (Bridie, 1979)
12.2 Persistence and degradability	Part of the components are poorly biodegradable.
Reaction product: Bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)	No data
Phenyl Glycidyl Ether	Not readily biodegradable (according to OECD criteria)
12.3 Bioaccumulative potential	The product has low potential for bioaccumulation.
Reaction product: Bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)	No data
Phenyl Glycidyl Ether	No data
12.4 Mobility in soil	The product is predicted to have low mobility in soil (The product is essentially insoluble in water).
Reaction product: Bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)	No data
Phenyl Glycidyl Ether	Estimated: log Koc 1.61 @ 25 °C. The substance is predicted to have low mobility in soil.
12.5 Other adverse effects	Not classified as PBT or vPvB. None of the substances in this product fulfil the criteria for being regarded as a PBT or vPvB substance.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods	Dispose of this material and its container as hazardous waste. Containers of this material may be hazardous when empty since they retain product residue. Dispose of wastes in an approved waste disposal facility.
13.2 Additional Information	Dispose of contents in accordance with local, state or national legislation.

SECTION 14: TRANSPORT INFORMATION

	ADR/RID	**IMDG**	**IATA**
14.1 UN number	UN 3082	UN 3082	UN 3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (Reaction product:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (Reaction product:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (Reaction product:

		Bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700))	Bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700))	Bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700))
14.3	**Transport hazard class(es)**	9	9	9
14.4	**Packing group**	III	III	III
14.5	**Environmental hazards**	Classified as a Marine Pollutant	Environmentally hazardous substance	Classified as a Marine Pollutant
14.6	**Special precautions for user**	See Section: 2		
14.7	**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**	Not applicable.		
14.8	**Additional Information**	None.		

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1 EU regulations

Authorisations and/or Restrictions On Use	Phenyl Glycidyl Ether: Entry 28: Restriction on supply of substances and mixtures to the general public, if classified as Carc. 1A or 1B.
Substance(s) of Very High Concern (SVHCs)	No components of the mixture are listed
Community Rolling Action Plan (CoRAP)	Reaction product: Bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700): Substance identified for evaluation in 2015.

15.1.2 National regulations

Wassergefährdungsklasse (Germany)	Water hazard class: 2

15.2 Chemical Safety Assessment Not available.

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: New format has been issued, all sections have been updated to include new information. Review SDS with care.

References: Existing Safety Data Sheet (SDS), Harmonised Classification(s) for Reaction product: Bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700) (CAS No. 25068-38-6). Existing ECHA registration(s) for Reaction product: Bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700) (CAS No. 25068-38-6), Phenyl Glycidyl Ether (CAS No. 122-60-1).

Literature References:

1. Bridie AL, Wolff CJM, Winter M. 1979. The acute toxicity of some Petrochemicals to Goldfish. Water Research Vol. 13, pages 623-626.

GHS Classification of the substance or mixture	Classification Procedure
Skin Irrit. 2; H315	Threshold Calculation
Skin Sens. 1; H317	Threshold Calculation
Eye Irrit. 2; H319	Threshold Calculation
Aquatic Chronic 2; H411	Summation Calculation

LEGEND

ACGIH: American Conference of Governmental Industrial Hygienists
LTEL: Long Term Exposure Limit
STEL: Short Term Exposure Limit
DNEL: Derived No Effect Level
PEL: Permissible Exposure Limit
PNEC: Predicted No Effect Concentration
PBT: Persistent, Bioaccumulative and Toxic
TLV: Threshold Limit Value
vPvB: very Persistent and very Bioaccumulative

Hazard Class / Classification code:	Hazard Statement(s)
Skin Irrit. 2; Skin corrosion/irritation, Category 2	H315: Causes skin irritation.
Skin Sens. 1 ; Skin sensitisation, category 1	H317: May cause an allergic skin reaction.
Eye Irrit. 2; Serious eye damage/irritation, Category 2	H319: Causes serious eye irritation.
Aquatic Chronic 2; Hazardous to the aquatic environment, Chronic ,	H411: Toxic to aquatic life with long lasting effects.

Category 2		
Aquatic Chronic 3; Hazardous to the aquatic environment, Chronic , Category 3		H412: Harmful to aquatic life with long lasting effects.

Training advice: Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required.

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Annex to the extended Safety Data Sheet (eSDS)

No information available.

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