

SAFETY DATA SHEET

Revision: 1.0 Date: 21.05.2015

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),
1272/2008 (CLP) & 453/2010

www.vishaypg.com

M-Bond A-12 Part A

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

1.1 Product identifier

Product Name	M-Bond A-12 Part A
Chemical Name	Mixture
CAS No.	Mixture
EINECS No.	Mixture
REACH Registration No.	None assigned.

1.2 Recommended use of the chemical and restrictions on use

Identified use(s)	Adhesives.
Uses advised against	None known.

1.3 Supplier's details

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 Phone No.

(00-1) 703-527-3887
CHEMTREC

2. SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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

Skin Irrit. 2; Causes skin irritation.
Skin Sens. 1; May cause sensitization by skin contact.
Eye Irrit. 2; Causes serious eye irritation.
Aquatic Chronic 2; Toxic to aquatic life with long lasting effects.

2.1.2 Directive 67/548/EEC & Directive 1999/45/EC

Xi; R36/38: Irritating to eyes and skin.
R43: May cause sensitization by skin contact.
N; R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2 Label elements

Product Name	According to Regulation (EC) No. 1272/2008 (CLP). M-Bond A-12 Part A
--------------	---

Hazard pictogram(s)



Signal word(s)

Warning

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.

SAFETY DATA SHEET

Revision: 1.0 Date: 21.05.2015

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),
1272/2008 (CLP) & 453/2010

www.vishaypg.com

Precautionary statement(s)

P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352: IF ON SKIN: Wash with plenty of soap and 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.

2.3 Other hazards

EUH205: Contains epoxy constituents. May produce an allergic reaction.

3. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances Substances in preparations / mixtures

3.2 Mixtures

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

Chemical identity of the substance	%W/W	CAS No.	EC No.	Hazard statement(s)
bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)	>60	25068-38-6	500-033-5	Eye Irrit. 2; H319 Skin Irrit. 2; H315 Skin Sens. 1; H317 Aquatic Chronic 2; H411
Non-hazardous ingredients	<40	-	-	Not classified

Directive 67/548/EEC & Directive 1999/45/EC

Chemical identity of the substance	%W/W	CAS No.	EC No.	EC Classification and Risk Phrases
bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)	>60	25068-38-6	500-033-5	Xi; R36/38: Irritating to eyes and skin. R43: May cause sensitization by skin contact. N; R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Non-hazardous ingredients	<40	-	-	Not classified

4. SECTION 4: FIRST AID MEASURES



4.1 Description of first aid measures

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Skin Contact

IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation or rash occurs: Get medical advice/attention.

Eye Contact

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

Ingestion

Unlikely to be hazardous if swallowed. Unlikely to be required but if necessary treat symptomatically.

4.2 Most important symptoms and effects, both acute and

Contains epoxy constituents. May produce an allergic reaction. Causes irritation

SAFETY DATA SHEET

Revision: 1.0 Date: 21.05.2015

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),
1272/2008 (CLP) & 453/2010

www.vishaypg.com

- 4.3 **Indication of any immediate medical attention and special treatment needed**
- delayed to eyes and skin.
None known. Treat symptomatically.

5. SECTION 5: FIRE-FIGHTING MEASURES

- 5.1 **Extinguishing media**
Suitable Extinguishing Media Extinguish with carbon dioxide, dry chemical, foam or waterspray.
Unsuitable Extinguishing Media Do not use water jet.
- 5.2 **Special hazards arising from the substance or mixture** May decompose in a fire giving off toxic fumes. Carbon monoxide, Carbon dioxide.
- 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. Avoid run off to waterways and sewers.

6. SECTION 6: ACCIDENTAL RELEASE MEASURES

- 6.1 **Personal precautions, protective equipment and emergency procedures** Ensure adequate ventilation. Shut off leaks if without risk. Avoid breathing vapours. Wear protective gloves/protective clothing/eye protection/face protection.
- 6.2 **Environmental precautions** Do not allow to enter drains, sewers or watercourses. (Marine Pollutant)
- 6.3 **Methods and material for containment and cleaning up** Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a container for disposal. Dispose of this material and its container as hazardous waste.
- 6.4 **Reference to other sections** See Section: 8, 13

7. SECTION 7: HANDLING AND STORAGE

- 7.1 **Precautions for safe handling** Ensure adequate ventilation. Do not breathe vapour. Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.
- 7.2 **Conditions for safe storage, including any incompatibilities** Keep away from heat and direct sunlight.
- Storage Temperature Ambient. 2 - 43 °C
Storage Life Stable under normal conditions.
Incompatible materials Keep away from: Oxidizing agents, unintended contact with amines, Strong Acids and Alkalis.
- 7.3 **Specific end use(s)** Adhesives.

8. SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 **Control parameters**
- 8.1.1 **Occupational exposure limits** No established Workplace Exposure Limit (UK HSE EH40)
- 8.1.2 **Biological limit value** Not established.
- 8.1.3 **PNECs and DNELs**

DNEL bisphenol-A-(epichlorhydrin)	Oral	Inhalation	Dermal
Industry - Long Term - Systemic effects	-	12.25 mg/m ³	8.33mg/kg bw/day
Industry - Short term - Systemic effects	-	12.25 mg/m ³	8.33mg/kg bw/day
Consumer - Long Term - Systemic effects	0.75mg/kg bw/day	-	3.57mg/kg bw/day
Consumer - Short term - Systemic effects	0.75mg/kg bw/day	-	3.57mg/kg bw/day

PNEC bisphenol-A-(epichlorhydrin)

SAFETY DATA SHEET

Revision: 1.0 Date: 21.05.2015

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),
1272/2008 (CLP) & 453/2010

www.vishaypg.com

Aquatic Compartment	PNEC aqua (freshwater) 0.006 mg/L PNEC aqua (marine water) 0.0006 mg/L PNEC aqua (intermittent releases) 0.018 mg/L PNEC STP 10 mg/L PNEC sediment (freshwater/marine water) 0.0996 mg/kg sediment dw
Terrestrial Compartment	PNEC soil 0.196 mg/kg soil dw

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Ensure adequate ventilation.

8.2.2 Individual protection measures, such as personal protective equipment (PPE)

Use personal protective equipment as required. Wash contaminated clothing before reuse. Avoid contact with skin and eyes.

Eye/face protection



Wear protective eye glasses for protection against liquid splashes. Wear eye protection with side protection (EN166).

Skin protection



Wear impervious gloves (EN374). Breakthrough time of the glove material: refer to the information provided by the gloves' producer. The gloves type used must be chosen based on the work activity and duration as well as concentration/quantity of material being handled.

Respiratory protection



Normally no personal respiratory protection is necessary.

Thermal hazards

Not applicable.

8.2.3 Environmental Exposure Controls

Avoid release to the environment.

9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Brown Viscous liquid.
Odour	Faint Epoxy Odour
Odour Threshold	Not available.
pH	Not established.
Melting Point/Freezing Point	-16 °C (bisphenol-A)
Initial boiling point and boiling range	~320°C (bisphenol-A)
Flash point	>= 264 <= 268°C (bisphenol-A)
Evaporation rate	Not available.
Flammability (solid, gas)	Non-flammable.
Upper/lower flammability or explosive limits	Not applicable.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	1.26 (H2O = 1) (Mixture)
Solubility(ies)	Not available.
Partition coefficient: n-octanol/water	>= 2.64 <= 3.78 log Pow (25 °C) (bisphenol-A)
Auto-ignition temperature	Not applicable.
Decomposition Temperature	>350°C (bisphenol-A)
Viscosity	Not available.
Explosive properties	Not available.
Oxidising properties	Not oxidising.

9.2 Other information

None.

SAFETY DATA SHEET

Revision: 1.0 Date: 21.05.2015

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),
1272/2008 (CLP) & 453/2010

www.vishaypg.com

10. 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	Combustion or thermal decomposition will evolve toxic and irritant vapours.
10.4	Conditions to avoid	The product may decompose if heated to temperatures above (°C): 300
10.5	Incompatible materials	Oxidizing agents, Corrosive Substances, Reducing agent, Strong Acids and Alkalis. Amines
10.6	Hazardous Decomposition Product(s)	May decompose in a fire giving off toxic fumes. Phenolic, Carbon monoxide, Carbon dioxide,

11. SECTION 11: TOXICOLOGICAL INFORMATION

11.1	Information on toxicological effects (Substances in preparations / mixtures)	
	Acute toxicity	
	Ingestion	Not classified.
	Inhalation	Not classified.
	Skin Contact	Skin Irrit. 2
	Eye Contact	Eye Irrit. 2
	Irritation	Eye Irrit. 2; Slight irritant to rabbit eyes. Skin Irrit. 2; Slight irritant to rabbit skin. (bisphenol-A)
	Corrosivity	Not classified.
	Sensitisation	Skin Sens. 1; bisphenol-A-(epichlorhydrin) Sensitisation (mouse LLNA)
	Repeated dose toxicity	Not classified.
	Carcinogenicity	No evidence of carcinogenicity.
	Mutagenicity	There is no evidence of mutagenic potential.
	Toxicity for reproduction	No data.
11.2	Other information	None.

12. SECTION 12: ECOLOGICAL INFORMATION

12.1	Toxicity	bisphenol-A Classified as a Marine Pollutant. bisphenol-A Oncorhynchus mykiss Fish: LC50 = 1.2 mg/L (96h) bisphenol-A Daphnia magna Aquatic invertebrates: LC50 = 2.7 mg/L (48h)
12.2	Persistence and degradability	Part of the components are poorly biodegradable.
12.3	Bioaccumulative potential	The product has low potential for bioaccumulation.
12.4	Mobility in soil	The product is predicted to have low mobility in soil. (Insoluble in water.)
12.5	Results of PBT and vPvB assessment	Not classified as PBT or vPvB.
12.6	Other adverse effects	None known.

13. SECTION 13: DISPOSAL CONSIDERATIONS

13.1	Waste treatment methods	This material and its container must be disposed of as hazardous waste. (2001/118EC). Send after pre-treatment to a appropriate hazardous waste incinerator facility according to legislation.
13.2	Additional Information	Dispose of contents in accordance with local, state or national legislation.

14. SECTION 14: TRANSPORT INFORMATION

		ADR/RID / IMDG / IATA
14.1	UN number	UN 3082
14.2	Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy Resin)
14.3	Transport hazard class(es)	9
14.4	Packing Group	III
14.5	Environmental hazards	Marine Pollutant / Environmentally hazardous substance
14.6	Special precautions for user	Causes irritation to eyes and skin.
14.7	Transport in bulk according to Annex II of	Not applicable.

SAFETY DATA SHEET

Revision: 1.0 Date: 21.05.2015

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),
1272/2008 (CLP) & 453/2010

www.vishaypg.com

14.8 **MARPOL73/78 and the IBC Code**
Additional information None.

15. 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 None.
- 15.1.2 **National regulations** None known.
- 15.2 **Chemical Safety Assessment** Not available.

16. SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1-16.

References: Existing Safety Data Sheet (SDS) and Existing ECHA registration(s) for bisphenol-A-(epichlorhydrin) (CAS# 25068-38-6).

Classification of the substance or mixture According to Regulation (EC) No. 1272/2008 (CLP).	Classification Procedure
Skin Irrit. 2; H315	Threshold Calculation
Skin Sens. 1; H317	Threshold Calculation
Eye Irrit. 2; H319	Threshold Calculation
Aquatic Chronic 2	Threshold Calculation

LEGEND

LTEL	Long Term Exposure Limit
STEL	Short Term Exposure Limit
DNEL	Derived No Effect Level
PNEC	Predicted No Effect Concentration
PBT	PBT: Persistent, Bioaccumulative and Toxic
vPvB	vPvT: very Persistent and very Toxic
OECD	Organisation for Economic Cooperation and Development

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.

Disclaimers

Information contained in this publication or as otherwise supplied to Users is believed to be accurate and is given in good faith, but it is for the Users to satisfy themselves of the suitability of the product for their own particular purpose. Vishay Precision Group gives no warranty as to the fitness of the product for any particular purpose and any implied warranty or condition (statutory or otherwise) is excluded except to the extent that exclusion is prevented by law. Vishay Precision Group accepts no liability for loss or damage (other than that arising from death or personal injury caused by defective product, if proved), resulting from reliance on this information. Freedom under Patents, Copyright and Designs cannot be assumed.

Annex to the extended Safety Data Sheet (eSDS)

No information available.