

SAFETY DATA SHEET

Revision: 1.0 Date: 30.11.2012

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







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M-Bond Curing Agent 10A

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

1.1 Product identifier	
Product Name	M-Bond Curing Agent 10A
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.
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 Directive 67/548/EEC & Directive 1999/45/EC	Xn; R21/22 T+; R26 C; R34 Xi; R37 R43 N; R52 Repr. Cat. 3; R62
2.2 Label elements	According to Directive 67/548/EEC & Directive 1999/45/EC
Product Name	M-Bond Curing Agent 10A
Hazard pictogram(s)	    C T+ Xn/Xi N
Risk Phrases	Xn; R21/22: Harmful in contact with skin and if swallowed. T+; R26: Very toxic by inhalation. C; R34: Causes burns. Xi; R37: Irritating to respiratory system. R43: May cause sensitization by skin contact. N; R52: Harmful to aquatic organisms.

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- 11 Safety Phrases
- Repr. Cat. 3; R62: Possible risk of impaired fertility.
- S23: Do not breathe vapour/spray.
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28: After contact with skin, wash immediately with plenty of soap and water.
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S61: Avoid release to the environment. Refer to special instructions/Safety Data Sheets.
- 2.3 Other hazards None.

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)
diethylenetriamine	>70	111-40-0	203-865-4	Acute Tox. 2; H330 Acute Tox. 4; H302 & H312 Skin Corr. 1B; H314 Skin Sens. 1; H317 STOT SE 3; H335
bisphenol A	<30	80-05-7	201-245-8	Skin Sens. 1; H317 Eye Dam. 1; H318 STOT SE 3; H335 Repr. 2; H361f Aquatic Chronic 2; H411

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

Chemical identity of the substance	%W/W	CAS No.	EC No.	EC Classification and Risk Phrases
diethylenetriamine	>70	111-40-0	203-865-4	Xn; R21/22: Harmful in contact with skin and if swallowed. T+; R26: Very toxic by inhalation. C; R34: Causes burns. Xi; R37: Irritating to respiratory system. R43: May cause sensitization by skin contact.
bisphenol A	<30	80-05-7	201-245-8	Xi; R37: Irritating to respiratory system. Xi; R41: Risk of serious damage to eyes. R43: May cause sensitization by skin contact. R52: Harmful to aquatic organisms. Repr. Cat. 3; R62: Possible risk of impaired fertility.

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

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Skin Contact	comfortable for breathing. If breathing is laboured, oxygen should be administered by qualified personnel. Call a POISON CENTER or doctor/physician if you feel unwell. IF ON SKIN (or hair): Rinse skin immediately with plenty of water for 15-20 minutes. Take off contaminated clothing and wash before reuse. If irritation (redness, rash, blistering) develops, get medical attention.
Eye Contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Hold eye open and rinse slowly and gently with water for 15-20 minutes. If eye irritation persists: Get medical advice/attention.
Ingestion	If swallowed, rinse mouth with water (only if the person is conscious). Drink two glasses of water. Do not induce vomiting. Call a POISON CENTER or doctor/physician.
4.2 Most important symptoms and effects, both acute and delayed	May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Aspiration of liquid may cause pulmonary oedema. Causes burns to skin, eyes, respiratory system and gastrointestinal tract. Suspected of damaging fertility.
4.3 Indication of any immediate medical attention and special treatment needed	Due to possible delayed effect of poisoning and for safety reasons, they should be kept under medical observation for at least 48 hours.

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, Nitrogen oxides.
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 contact with skin, eyes or clothing. 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.
6.3 Methods and material for containment and cleaning up	Use non-sparking equipment when picking up flammable spill. 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	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Ensure adequate ventilation. Do not breathe vapour. In case of inadequate ventilation wear respiratory protection. 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. Wash hands before breaks and after work. Remove contaminated clothing and wash clothing before reuse.
7.2 Conditions for safe storage, including any incompatibilities	Store under inert gas (e.g nitrogen) to prevent ingress of moisture or air into the container. If a container is part emptied flush thoroughly with inert gas prior to resealing. Store in a well-ventilated place. Keep container tightly closed. Keep away from heat, sources of ignition and direct sunlight.
Storage Temperature	Ideal storage temperature is (°C): <27°C
Storage Life	Stable under normal conditions.

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Incompatible materials
Protect from moisture.
Keep away from: Flammable liquid, Reducing agent, Oxidizing agents, Corrosive Substances, Alkalis or nitrosating agents. Do not allow contact with Copper, copper alloy, Aluminium, or aluminum alloy materials. Bulk storage should be under nitrogen blanket.

7.3 Specific end use(s)
Adhesives.

8. 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/m ³)	STEL (ppm)	STEL (mg/m ³)	Note:
2,2'-Iminodi(ethylamine)	111-40-0	1	4.3	-	-	WEL, Sk
Bisphenol A (inhalable dust)	80-05-7	-	10	-	-	WEL

Note: WEL: Workplace Exposure Limit (UK HSE EH40). Sk - Can be absorbed through skin.

8.1.2 Biological limit value

Not established.

8.1.3 PNECs and DNELs

DNEL (Bisphenol A)	Oral	Inhalation	Dermal
Industry - Long Term - Systemic effects	-	10 mg/m ³	1.4 mg/kg bw/day
Industry - Long Term - Local effects	-	10 mg/m ³	-
Industry - Short term - Local effects	-	10 mg/m ³	-
Industry - Short term - Systemic effects	-	10 mg/m ³	1.4 mg/kg bw/day
Consumer - Long Term - Systemic effects	0.05mg/kg bw/day	5 mg/m ³	0.7 mg/kg bw/day
Consumer - Long Term - Local effects	-	5 mg/m ³	-
Consumer - Short term - Systemic effects	0.05mg/kg bw/day	5 mg/m ³	0.7 mg/kg bw/day
Consumer - Short term - Local effects	-	5 mg/m ³	-

PNEC	Bisphenol A
Aquatic Compartment	PNEC aqua (Fresh water) 0.018 mg/L PNEC aqua (Salt Water) 0.016 mg/L PNEC aqua (intermittent releases) 0.01 mg/L PNEC STP 320 mg/L PNEC sediment (Fresh water) 2.2 mg/kg sediment dw PNEC sediment (Salt Water) 0.44 mg/kg sediment dw PNEC oral 13.8 mg/kg food
Terrestrial Compartment	PNEC soil 3.7 mg/kg soil dw

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Ensure adequate ventilation. Atmospheric levels should be controlled in compliance with the occupational exposure limit.

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 goggles giving complete protection to eyes to protect against liquid splashes (EN166).

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Skin protection



Wear impervious gloves (EN374). Breakthrough time of the glove material: refer to the information provided by the gloves' producer.

Respiratory protection



Atmospheric levels should be controlled in compliance with the occupational exposure limit. In case of inadequate ventilation wear respiratory protection. A suitable mask with filter type A (EN141 or EN405) may be appropriate.

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	Clear Liquid
Odour	Ammoniacal Odour
Odour Threshold	Not available.
pH	Not established.
Melting Point/Freezing Point	-39°C (2,2'-Iminodi(ethylamine))
Initial boiling point and boiling range	199°C (Mixture)
Flash point	97°C (2,2'-Iminodi(ethylamine))
Evaporation rate	Not established.
Flammability (solid, gas)	Not established.
Upper/lower flammability or explosive limits	Not available.
Vapour pressure	<1 @ 27°C (Mixture)
Vapour density	3.56 (Air = 1) (Mixture)
Relative density	1.02 g/cm ³ (H ₂ O = 1) (Mixture)
Solubility(ies)	Soluble in water. 100%
Partition coefficient: n-octanol/water	ca. -1.3 log Pow (2,2'-Iminodi(ethylamine))
Auto-ignition temperature	358°C (2,2'-Iminodi(ethylamine))
Decomposition Temperature	Not available.
Viscosity	Not available.
Explosive properties	Not available.
Oxidising properties	Not oxidising.

9.2 Other information

None.

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	Hazardous polymerization will not occur.
10.4 Conditions to avoid	Keep away from heat, sources of ignition and direct sunlight.
10.5 Incompatible materials	Flammable liquid, Reducing agent, Oxidizing agents, Corrosive Substances, Alkalis or nitrosating agents. Do not allow contact with Copper, copper alloy, Aluminium, or aluminum alloy materials.
10.6 Hazardous Decomposition Product(s)	May decompose in a fire giving off toxic fumes. Carbon monoxide, Carbon dioxide, Nitrogen oxides.

11. SECTION 11: TOXICOLOGICAL INFORMATION

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

Acute toxicity

Ingestion

Acute Tox. 4; ATEmix (Oral) = 714 mg/kg

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Inhalation	Acute Tox. 2; ATEmix (Inhalation) = 0.7 mg/l
Skin Contact	Acute Tox. 4; ATEmix (Dermal) = 1571 mg/kg
Eye Contact	Causes serious eye damage. (Bisphenol A)
Irritation	Not classified.
Corrosivity	Skin Corr. 1B; Causes severe burns to skin, eyes, respiratory system and gastrointestinal tract. (2,2'-Iminodi(ethylamine))
Sensitisation	Skin Sens. 1; Skin sensitisation has been reported in humans.
Repeated dose toxicity	Not classified.
Carcinogenicity	No evidence of carcinogenicity.
Mutagenicity	There is no evidence of mutagenic potential.
Toxicity for reproduction	Repr. 2; Suspected of damaging fertility. (Bisphenol A)
11.2 Other information	None.

12. SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity	Classified as a Marine Pollutant. Harmful to aquatic organisms.
12.2 Persistence and degradability	Readily biodegradable.
12.3 Bioaccumulative potential	The product has low potential for bioaccumulation.
12.4 Mobility in soil	The product is predicted to have high mobility in soil. (Water Soluble)
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. (Bisphenol A)
14.3 Transport hazard class(es)	9
14.4 Packing Group	III
14.5 Environmental hazards	Environmentally hazardous substance/Marine Pollutant
14.6 Special precautions for user	Causes burns to skin, eyes, respiratory system and gastrointestinal tract.
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
14.8 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 known.
15.1.2 National regulations	None known.
15.2 Chemical Safety Assessment	Not available.

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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 2,2'-iminodi(ethylamine) (CAS# 111-40-0) and Bisphenol A (CAS# 80-05-7).

Classification of the substance or mixture According to Directive 67/548/EEC & Directive 1999/45/EC	Classification Procedure
T+; R26	ATEmix Calculation(s)
Xn; R21/22	ATEmix Calculation(s)
C; R34	Threshold Calculation
Xi; R37	Threshold Calculation
R43	Threshold Calculation
Repr. Cat. 3; R62	Harmonised Classification
N; R52	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
ATEmix	Acute Toxicity Estimate Mixture Calculation

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.