

SAFETY DATA SHEET

Version: 03

Date of Issue: 30 November 2018

Date of First Issue: 20 March 2012


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

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

- 1.1 Product identifier**
Product Name M-Bond Curing Agent – Type 15
CAS No. 104-78-9
EINECS No. 203-236-4
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 telephone number**
Emergency Phone No. (00-1) 703-527-3887 – CHEMTREC
Languages spoken 24 hours, English spoken

2. SECTION 2: HAZARDS IDENTIFICATION

- 2.1 Classification of the substance or mixture**
2.1.1 Regulation (EC) No. 1272/2008 (CLP) Flam. Liq. 3; H226
Acute Tox. 4; H302
Acute Tox. 4; H312
Skin Corr. 1B; H314
Skin Sens. 1; H317
Eye Dam. 1; H318
STOT SE 3; H335
- 2.2 Label elements**
Product Name According to Regulation (EC) No. 1272/2008 (CLP)
M-Bond Curing Agent – Type 15
Hazard Pictogram(s) 
- Signal Word(s) DANGER
- Contains: 3-Diethylaminopropylamine
- Hazard Statement(s)
H226: Flammable liquid and vapour.
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.
H335: May cause respiratory irritation.

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Precautionary Statement(s)

P210: Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310: Immediately call a POISON CENTER or doctor/physician.

Additional Information

None

2.3 Other hazards

None

3. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

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

Chemical identity of the substance	CAS No.	EC No.	REACH Registration No.	Hazard Statement(s)
3-Diethylaminopropylamine	104-78-9	203-236-4	Not yet assigned in the supply chain	Flam. Liq. 3; H226 Acute Tox. 4; H302 Acute Tox. 4; H312 Skin Corr. 1B; H314 Skin Sens. 1; H317 Eye Dam. 1; H318 STOT SE 3; H335 [Target organ(s): Respiratory tract, Exposure route: Inhalation]

For full text of H/P Statements see section 16.

3.2 Mixtures Not applicable

4. SECTION 4: FIRST AID MEASURES



4.1 Description of first aid measures

Self-protection of the first aider

Do not breathe vapour. Wear suitable protective clothing. Avoid contact with skin, eyes and clothes. A washing facility/water for eye and skin cleaning purposes should be present.

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Apply artificial respiration if necessary (do not employ mouth-to-mouth method). Call a POISON CENTER/doctor if you feel unwell.

Skin Contact

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER/doctor.

Eye Contact

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/doctor. Treatment by an ophthalmologist due to possible caustic burn of the eyes may be required.

Ingestion

IF SWALLOWED: Rinse mouth. Do not induce vomiting unless instructed to do so by medical personnel. Immediately call a POISON CENTER/doctor.

4.2 Most important symptoms and effects, both acute and delayed

Harmful if swallowed or in contact with skin. Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause respiratory irritation. (Respiratory tract, Exposure route: Inhalation)

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4.3 Indication of any immediate medical attention and special treatment needed Notes to a physician:	Treat symptomatically. IF IN EYES: Obtain prompt consultation, preferably from an ophthalmologist. Chemical eye burns may require extended irrigation. IF SWALLOWED: Due to irritant properties, swallowing may result in burns/ulceration of mouth, stomach and lower gastrointestinal tract with subsequent stricture.
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5. 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.
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	Flammable liquid and vapour. Decomposes in a fire giving off toxic fumes: Ammonia, Nitrogen oxides, Carbon monoxide and Carbon dioxide. Vapours are heavier than air and may travel considerable distances to a source of ignition and flashback. Sealed containers may rupture explosively if hot.
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. Avoid contact with skin, eyes or clothing. Avoid breathing vapours. Stop leak if safe to do so. Eliminate all ignition sources if safe to do so. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. 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.
6.3 Methods and material for containment and cleaning up	Evacuate the area and keep personnel upwind. Contain spillages. Use non-sparking equipment when picking up flammable spill. Adsorb spillages onto sand, earth or any suitable adsorbent material. Neutralize with: sodium bisulphate solution. Transfer to a container for disposal. Ventilate the area and wash spill site after material pick-up is complete. 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	Avoid contact with skin, eyes or clothing. Do not breathe vapour. Ensure adequate ventilation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use personal protective equipment as required. See Section: 8. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Ground and bond container and receiving equipment.
7.2 Conditions for safe storage, including any incompatibilities Storage temperature Storage life Incompatible materials	Store in a well-ventilated place. Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Suitable containers: Mild steel, Glass (Small Quantities) Ambient. <50 °C Stable under normal conditions. Keep away from: Strong oxidising agents, Acids, Nitrates, Nitrites, Halogens, Carbon dioxide, Nitric oxide and Water. May react violently with: Alkalis.
7.3 Specific end use(s)	See Section: 1.2

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8. SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 Control parameters**
- 8.1.1 Occupational Exposure Limits** Not established.
- 8.1.2 Biological limit value** Not established.
- 8.1.3 PNECs and DNELs** Not established.
- 8.2 Exposure controls**
- 8.2.1 Appropriate engineering controls** Ensure adequate ventilation or use appropriate containment. Local exhaust recommended. Use non-sparking ventilation systems, approved explosion-proof equipment, and intrinsically safe electrical systems. Guarantee that the eye flushing systems and safety showers are located close to the working place.
- 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. Do not breathe vapour. Wash hands before breaks and after work. Keep work clothes separately. 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 (EN166).
Recommended: Safety spectacles/goggles/full face shield.
- 
- Skin protection** Hand protection: Wear impervious gloves (EN374). Gloves should be changed regularly to avoid permeation problems. Breakthrough time of the glove material: refer to the information provided by the gloves' producer.
Recommended: PVC, Neoprene
- 
- Body protection: Wear impervious protective clothing, including boots, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
- Respiratory protection** In case of inadequate ventilation wear respiratory protection. Open system(s): Wear suitable respiratory protective equipment.
Recommended: A suitable mask with filter type A (EN141 or EN405) may be appropriate. Prolonged, direct contact: A self contained breathing apparatus may be appropriate.
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- 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 | Almost colourless to pale yellow Liquid |
| Odour | Amine-like Odour |
| Odour threshold | Not available. |
| pH | Not established. |
| Melting point/freezing point | Not established. |
| Initial boiling point and boiling range | 168-171°C |
| Flash point | 53°C |
| Evaporation rate | Not available. |
| Flammability (solid, gas) | Not applicable - Liquid |
| Upper/lower flammability or explosive limits | Flammable Limits (Lower) (%v/v) 1, Flammable Limits (Upper) (%v/v) 7.5 |
| Vapour pressure | 2.2 mbar @ 20°C |
| Vapour density | Not available. |
| Relative density | 0.82 (H ₂ O = 1) |

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Solubility(ies)	Miscible with: 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

Volatile Organic Compound Content 0%

10. SECTION 10: STABILITY AND REACTIVITY

10.1 Stability and reactivity	Stable under normal conditions.
10.2 Chemical stability	Stable under normal conditions.
10.3 Possibility of hazardous reactions	May react violently with: Alkalis. Strong oxidising agents, Nitrates, Peroxides.
10.4 Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid contact with moisture.
10.5 Incompatible materials	Do not mix with acids and alkalis. Keep away from: Strong oxidising agents, Nitrates, Nitrites, Halogens, Carbon dioxide, Nitric oxide and Water.
10.6 Hazardous decomposition product(s)	Combustion or thermal decomposition will evolve toxic vapours.: Ammonia, Nitrogen oxides, Carbon monoxide and Carbon dioxide.

11. SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects (Substances in preparations / mixtures)	
Acute toxicity	
Ingestion	Acute Tox. 4: Harmful if swallowed. Harmonised Classification LD50 (oral,rat) mg/kg: 830 (OECD 401)
Inhalation	Acute Tox. 4: May be harmful in contact with skin. Harmonised Classification No data
Skin Contact	Based upon the available data, the classification criteria are not met.
Skin corrosion/irritation	Skin Corr. 1B: Causes severe skin burns. Harmonised Classification Corrosive to rabbit skin (Unnamed, 1961)
Serious eye damage/irritation	Eye Dam. 1: Causes serious eye damage. Harmonised Classification Causes serious eye damage. (Unnamed, 1961)
Respiratory or skin sensitization	Skin Sens. 1: May cause an allergic skin reaction. Harmonised Classification Skin sensitization: Positive (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	STOT SE 3: May cause respiratory irritation. (Respiratory tract, Exposure route: Inhalation). Irritating to respiratory system. (OECD 408)
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.

12. SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity	Based upon the available data, the classification criteria are not met. Estimated Mixture LC50 >100 mg/l (Fish) Acute Toxicity: LC50 (fish) mg/l (96 hour): 146.6 (German national standard DIN 38 412, part L15) Chronic Toxicity: No data
12.2 Persistence and degradability	This product is readily biodegradable in water.
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.

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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 Dispose of this material and its container as hazardous waste. Send after pre-treatment to a appropriate hazardous waste incinerator facility according to legislation. Containers of this material may be hazardous when empty since they retain product residue.

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 2684	UN 2684	UN 2684
14.2 Proper Shipping Name	3- DIETHYLAMINOPROPY L-AMINE	3- DIETHYLAMINOPROPY L-AMINE	3- DIETHYLAMINOPROPY L-AMINE
14.3 Transport hazard class(es)	3 + 8	3 + 8	3 + 8
14.4 Packing group	III	III	III
14.5 Environmental hazards	Not classified as a Marine Pollutant.	Not classified as a Marine Pollutant.	Not 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		

15. SECTION 15: REGULATORY INFORMATION

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

15.1.1 EU regulations
Substance(s) of Very High Concern (SVHCs) Not listed
CoRAP Substance Evaluation Not listed
Annex XVII (Restrictions) Entry 40: Restricted in aerosol dispensers intended for supply to the general public for entertainment and decorative purposes.

15.1.2 National regulations
Germany Water hazard class: 1

15.2 Chemical Safety Assessment Not available.

16. SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: V3.0
Updated Section 1.4, 3.1, 4.1, 7.2, 11, 12, 15, 16.

References: Existing Safety Data Sheet (SDS), Existing ECHA registration(s) for 3-Diethylaminopropylamine (CAS No. 104-78-9) and Harmonised Classification(s) for 3-Diethylaminopropylamine (CAS No. 104-78-9).

Classification of the substance or mixture According to Regulation (EC) No. 1272/2008 (CLP)	Classification Procedure
Flam. Liq. 3; H226	Flash Point / Harmonised Classification
Acute Tox. 4; H302	Harmonised Classification
Acute Tox. 4; H312	Harmonised Classification
Skin Corr. 1B; H314	Threshold Calculation / Harmonised Classification
Skin Sens. 1; H317	Threshold Calculation / Harmonised Classification
Eye Dam. 1; H318	Threshold Calculation / Harmonised Classification

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STOT SE 3; H335	Expert judgement
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LEGEND

LTEL: Long Term Exposure Limit

STEL: Short Term Exposure Limit

DNEL: Derived No Effect Level

OCED: Organisation for Economic Cooperation and Development

PNEC: Predicted No Effect Concentration

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Hazard Class / Classification code:

Flam. Liq. 3; Flammable Liquid, Category 3

Acute Tox. 4; Acute toxicity, Category 4

Acute Tox. 4; Acute toxicity, Category 4

Skin Corr. 1B; Skin corrosion/irritation, Category 1B

Skin Sens. 1 ; Skin sensitisation, category 1

Eye Dam. 1; Serious eye damage/irritation, Category 1

STOT SE 3; Specific target organ toxicity — single exposure,
Category 3

Hazard Statement(s)

H226: Flammable liquid and vapour.

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.

H318: Causes serious eye damage.

H335: May cause respiratory irritation.

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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