

# SAFETY DATA SHEET

Version: 02

Date of Issue: 30 November 2018

Date of First Issue: 08 September 2014

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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 A-12 Part B  
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.

Languages spoken (00-1) 703-527-3887 – CHEMTREC  
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)

Skin Irrit. 2; H315  
Skin Sens. 1A; H317  
Eye Dam. 1; H318  
Aquatic Chronic 2; H411

### 2.2 Label elements

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

Hazard Pictogram(s)



Signal Word(s)

DANGER

Contains:

Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines  
(Polyamide Resin)

Hazard Statement(s)

H315: Causes skin irritation.  
H317: May cause an allergic skin reaction.  
H318: Causes serious eye damage.  
H411: Toxic to aquatic life with long lasting effects.

Precautionary Statement(s)

P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes.  
Remove contact lenses, if present and easy to do. Continue rinsing.

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P310: Immediately call a POISON CENTER/doctor.  
P302+P352: IF ON SKIN: Wash with plenty of water.  
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.  
P273: Avoid release to the environment.

## Additional Information

None.

## 2.3 Other hazards

None.

### 3. 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 Statement(s)
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines (Polyamide Resin)	60-80	68410-23-1	614-452-7	Not yet assigned in the supply chain	Skin Irrit. 2; H315 Skin Sens. 1A; H317 Eye Dam. 1; H318 Aquatic Chronic 2; H411
Alumina/Aluminum Oxide <sup>^</sup>	30-40	1344-28-1	215-691-6	Not yet assigned in the supply chain	Not classified
Titanium dioxide <sup>^</sup>	1-5	13463-67-7	236-675-5	Not yet assigned in the supply chain	Not classified

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

### 4. 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. 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. 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. Obtain medical attention if ill effects occur.

Skin Contact

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Contaminated clothing should be thoroughly cleaned. 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. Immediately call a POISON CENTER/doctor. Obtain prompt consultation, preferably from an ophthalmologist.

Ingestion

IF SWALLOWED: Do not give anything by mouth to an unconscious person. Wash out mouth with water and give small quantities of water to drink. Do not induce vomiting. Obtain medical attention if ill effects occur.

#### 4.2 Most important symptoms and effects, both acute and delayed

Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage.

#### 4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Chemical eye burns may require extended irrigation.

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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** Combustion or thermal decomposition will evolve toxic and irritant vapours. Carbon monoxide, Carbon dioxide and Nitrogen oxides.
- 5.3 Advice for fire-fighters** Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Evacuate the area and keep personnel upwind. 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. Stop leak 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** Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a container for disposal. Ventilate the area and wash spill site after material pick-up is complete. (Wash with plenty of water/ 5% acetic acid). 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. Avoid breathing vapours. Avoid contact with skin, eyes or clothing. 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.
- 7.2 Conditions for safe storage, including any incompatibilities**  
Storage temperature Keep container tightly closed, in a cool, well ventilated place. Keep away from direct sunlight.  
Storage life Keep at a temperature not exceeding (°C): 40°C  
Incompatible materials Stable under normal conditions.
- 7.3 Specific end use(s)** Keep away from: Acids, strong bases and Strong oxidising agents.  
See Section: 1.2

## 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 <sup>3</sup> )	STEL (ppm)	STEL (mg/m <sup>3</sup> )	Note
Alumina/Aluminum Oxide	1344-28-1	- -	10 4	- -	- -	WEL Inhalable Aerosol Respirable Aerosol
Titanium dioxide	13463-67-7	- -	10 4	- -	- -	WEL Inhalable Aerosol Respirable Aerosol

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

- 8.1.2 Biological limit value** Not established.
- 8.1.3 PNECs and DNELs** Not established.

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## 8.2 Exposure controls

### 8.2.1 Appropriate engineering controls

Ensure adequate ventilation or use appropriate containment. Atmospheric levels should be controlled using the principles of good occupational hygiene practice. A washing facility/water for eye and skin cleaning purposes should be present.

### 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 breathing vapours. Avoid contact with skin, eyes or clothing. Wash hands before breaks and after work. Keep work clothes separately. Contaminated clothing should be thoroughly cleaned. Do not eat, drink or smoke at the work place.

Eye/ face protection



Wear eye protection with side protection (EN166). Do not wear contact lenses when working with this material.

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: Butyl rubber, breakthrough time: > 480 minutes.

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

Respiratory protection



Normally no personal respiratory protection is necessary. Wear suitable respiratory protective equipment if exposure to high levels of material are likely.

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	Mixture is a paste. Light Coloured.
Odour	Ammoniacal.
Odour threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	260 °C [Open cup]
Evaporation rate	< 0.001 (BuAc = 1)
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	Not applicable.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	>0.97 (H2O = 1)
Solubility(ies)	Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines (Polyamide Resin): Slightly soluble in: Water (40 mg/l)
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	Not available.
Decomposition Temperature	Not available.
Viscosity	Not available.

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Explosive properties Not explosive.  
Oxidising properties Not oxidising.

9.2 Other information None.

## 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** Hazardous polymerisation will not occur.  
**10.4 Conditions to avoid** Keep away from direct sunlight. Keep at a temperature not exceeding (°C): 40°C  
**10.5 Incompatible materials** Keep away from: Acids, strong bases and Strong oxidising agents.  
**10.6 Hazardous decomposition product(s)** May decompose in a fire giving off toxic fumes. Carbon monoxide, Carbon dioxide and Nitrogen oxides.

## 11. 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

Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines (Polyamide Resin)

Skin Irrit. 2: Causes skin irritation.

Skin Irrit. 2; H315

Read across: Irritating to skin. (in vitro) (Model: EpiDerm SIT (EPI-200) OECD 439)

#### Serious eye damage/irritation

Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines (Polyamide Resin)

Eye Dam. 1: Causes serious eye damage.

Eye Dam. 1; H318

Causes severe eye damage. (rabbit) (OECD 405)

#### Respiratory or skin sensitization

Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines (Polyamide Resin)

Skin Sens. 1A: May cause an allergic skin reaction.

Skin Sens. 1A; H317

Skin sensitization: Positive (mouse) (OECD 429)

#### 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.

## 12. SECTION 12: ECOLOGICAL INFORMATION

**12.1 Toxicity** Aquatic Chronic 2: Toxic to aquatic life with long lasting effects.  
Estimated Mixture LC50 >1 ≤ 10 mg/l (Fish)

**12.2 Persistence and degradability** No data for the mixture as a whole.  
Inherently biodegradable, not fulfilling criteria (OECD 301 B)

Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines (Polyamide Resin)

Aluminium oxide

Titanium dioxide

Not applicable for inorganic substances

Not applicable for inorganic substances

**12.3 Bioaccumulative potential**

Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines (Polyamide Resin)

No data for the mixture as a whole.

The substance has high potential for bioaccumulation. BCF: 492 L/kg. (QSAR Model: BCFBAFv3.01)

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	Aluminium oxide	Not applicable for inorganic substances.
	Titanium dioxide	Not applicable for inorganic substances
12.4	<b>Mobility in soil</b>	No data for the mixture as a whole.
	Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines (Polyamide Resin)	Koc @ 20 °C: 1000000 (QSAR Model: KOCWIN v2.00)
	Aluminium oxide	Not applicable for inorganic substances. Log Kd: 3 -5.
	Titanium dioxide	The substance has low mobility in soil.
12.5	<b>Results of PBT and vPvB assessment</b>	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.
12.6	<b>Other adverse effects</b>	None known.

### 13. SECTION 13: DISPOSAL CONSIDERATIONS

13.1	<b>Waste treatment methods</b>	Containers of this material may be hazardous when empty since they retain product residue. This material and its container must be disposed of as hazardous waste. Send after pre-treatment to an appropriate hazardous waste incinerator facility according to legislation.
13.2	<b>Additional Information</b>	Dispose of contents in accordance with local, state or national legislation.

### 14. SECTION 14: TRANSPORT INFORMATION

	<b>ADR/RID</b>	<b>IMDG</b>	<b>IATA</b>
14.1	<b>UN number</b>	UN 3082	UN 3082
14.2	<b>Proper Shipping Name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
14.3	<b>Transport hazard class(es)</b>	9	9
14.4	<b>Packing group</b>	III	III
14.5	<b>Environmental hazards</b>	Environmentally hazardous substance	Classified as a Marine Pollutant
14.6	<b>Special precautions for user</b>	See Section: 2	Environmentally hazardous substance
14.7	<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable.	
14.8	<b>Additional Information</b>	None.	

### 15. SECTION 15: REGULATORY INFORMATION

15.1	<b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b>	
15.1.1	<b>EU regulations</b>	
	Authorisations and/or Restrictions On Use	No components of the mixture are listed
	Substance(s) of Very High Concern (SVHCs)	No components of the mixture are listed
	CoRAP Substance Evaluation	No components of the mixture are listed
15.1.2	<b>National regulations</b>	
	Wassergefährdungsklasse (Germany)	Water hazard class: 2
15.2	<b>Chemical Safety Assessment</b>	Not available.

### 16. SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: V2.0  
Updates Section: 1.4, 3.2, 4.1, 5.1, 6.1, 7.2, 8.2.2, 11, 12, 14, 15, 16.

**References:** Existing Safety Data Sheet (SDS) and Existing ECHA registration(s) for Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines (Polyamide Resin) (CAS No. 68410-23-1), Aluminium oxide (CAS No.1344-28-1), and Titanium Dioxide (CAS No.13463-67-7).

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Classification of the substance or mixture According to Regulation (EC) No. 1272/2008 (CLP)	Classification Procedure
Skin Irrit. 2; H315	Threshold Calculation
Skin Sens. 1A; H317	Threshold Calculation
Eye Dam. 1; H318	Threshold Calculation
Aquatic Chronic 2; H411	Summation Calculation

## LEGEND

LTEL: Long Term Exposure Limit

STEL: Short Term Exposure Limit

DNEL: Derived No Effect Level

PNEC: Predicted No Effect Concentration

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

### Hazard Class / Classification code:

Skin Irrit. 2; Skin corrosion/irritation, Category 2

Skin Sens. 1 ; Skin sensitisation, category 1

Eye Irrit. 2; Serious eye damage/irritation, Category 2

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

Aquatic Chronic 2; Hazardous to the aquatic environment, Chronic , Category 2

### Hazard Statement(s)

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation.

H318: Causes serious eye damage.

H411: Toxic 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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