SAFETY DATA SHEET

Revision: 1.0 Date: 21.04.2015


M-Bond 200 Adhesive

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

1.1 Product Identifier
   Product Name: M-Bond 200 Adhesive
   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 6FW
   United Kingdom
   +44 (0) 1256 462131
   +44 (0) 1256 471441
   mm.uk@vishaypg.com

1.4 Emergency Phone No.
   1-800-424-9300 (U.S.)
   CHEMTREC

2. SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
   GHS Classification: Skin Irrit. 2; Causes skin irritation.
   Eye Irrit. 2; Causes serious eye irritation.
   STOT SE 5; Specific target organ toxicity — single exposure 3

2.2 Label elements
   Product Name: M-Bond 200 Adhesive
   Hazard Pictogram(s):
   Warning:
   H315: Causes skin irritation.
   H319: Causes serious eye irritation.
   H335: May cause respiratory irritation.
   Signal Word(s):
   Hazard Statement(s):
   Precautionary Statement(s):
   P261: Avoid breathing vapours.
   P280: Wear protective gloves/protective clothing/eye protection/face protection.
   P302+P352: IF ON SKIN: Wash with plenty of soap and water.
   P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
   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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2.3 Other hazards
P308+P313: IF exposed or concerned: Get medical advice/attention.

3. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances Substances in preparations / mixtures
3.2 Mixtures
GHS Classification

<table>
<thead>
<tr>
<th>Chemical identity of the substance</th>
<th>%W/W</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>Hazard Statement(s)</th>
</tr>
</thead>
</table>
| ethyl 2-cyanooacrylate             | 70 – 100 | 7085-85-0 | 230-391-5 | Skin Irrit. 2; H315  
|                                   |      |         |        | Eye Irrit. 2; H319  
|                                   |      |         |        | STOT SE 5; H335  |

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. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin Contact
IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation 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 route of exposure. If swallowed, rinse mouth with water (only if the person is conscious). Do not induce vomiting. Get medical advice/attention if you feel unwell.
Cyanoaacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children. May cause respiratory irritation. Causes irritation to eyes and skin. Remove excess adhesive. Soak in warm, soapy water or in a warm 1% solution of sodium bicarbonate. The adhesive will come loose from the skin in several hours. Dried adhesive does not present a health hazard even when bonded to the skin. If in eyes, wash thoroughly with warm water and apply a gaze patch. The eye will open without further action, typically in 1 - 4 days. There will be no residual damage. Do not try to open the eyes by manipulation.

4.2 Most important symptoms and effects, both acute and delayed

4.3 Indication of any immediate medical attention and special treatment needed

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. Combustion or thermal decomposition will evolve toxic and irritant vapours.

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 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

Do not use cloths for mopping up. Flood with water to complete polymerisation and scrape off the floor. Cured material can be disposed of as non-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. In case of inadequate ventilation wear respiratory protection. Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with skin, eyes or clothing.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool/low-temperature, well-ventilated (dry) place. Keep container closed.

- Ambient. >25°C.
- Stable under normal conditions.
- Protect from moisture.
- Adhesives.

7.3 Specific end use(s)

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 (PNEC Not available.)

<table>
<thead>
<tr>
<th>DNEL (ethyl 2-cyanoacrylate)</th>
<th>Oral</th>
<th>Inhalation</th>
<th>Dermal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industry - Long Term - Local effects</td>
<td>-</td>
<td>9.25 mg/m³</td>
<td>-</td>
</tr>
<tr>
<td>Industry - Long Term - Systemic effects</td>
<td>-</td>
<td>9.25 mg/m³</td>
<td>-</td>
</tr>
<tr>
<td>Consumer - Long Term - Systemic effects</td>
<td>-</td>
<td>9.25 mg/m³</td>
<td>-</td>
</tr>
<tr>
<td>Consumer - Short term - Local effects</td>
<td>-</td>
<td>9.25 mg/m³</td>
<td>-</td>
</tr>
</tbody>
</table>

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.

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

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

Wear impervious gloves (EN374). PVC / Nitrile rubber. Breakthrough time of the glove material: refer to the information provided by the gloves' producer.
Respiratory protection

Normally no personal respiratory protection is necessary. In case of inadequate ventilation wear respiratory protection.

Thermal hazards

Heat of Polymerization. Molten material can cause severe burns. Do NOT try to peel molten polymer from the skin. Cool rapidly with water. Avoid release to the environment.

8.2.3 Environmental Exposure Controls

9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physico-chemical properties of substance ethyl 2-cyanoacrylate.

Appearance
Clear Liquid

Odour
Pungent Odour

Odour Threshold
Not available.

pH
Not established.

Melting Point/Freezing Point
-31°C (EU Method A.1)
214°C (EU Method A.2)
82.5°C [Closed cup] (EU Method A.9)

Initial boiling point and boiling range
Not established.

Flash point
Non-flammable (EU Method A.12)

Evaporation Rate
Not available.

Flammability (solid, gas)
<21 Pa @ 20°C

Upperflaver flammability or explosive limits
>1 (Air = 1)

Vapour pressure
1.043 EU Method A.3

Vapour density
24 µg/L In Water (EU Method A.6)

Relative density
480°C (EU Method A.15)

Solubility(ies)
Not available.

Partition coefficient: n-octanol/water
Not available.

Auto-ignition temperature
Not available.

Decomposition Temperature
Not available.

Viscosity
Not available.

Explosive properties
Not available.

Oxidising properties
Not oxidising.

9.2 Other Information

VOC g/l: 1000

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
Stable under normal conditions.

10.4 Conditions to avoid
Store at temperatures not exceeding (°C): 25°C
Water, Alcohols, Acids, Alkalis, Peroxides.

10.5 Incompatible materials
May decompose in a fire giving off toxic fumes. Carbon monoxide, Carbon dioxide, cyanide and Oxides of nitrogen.

10.6 Hazardous decomposition product(s)

11. SECTION 11: TOXICOLOGICAL INFORMATION

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

Acute toxicity
Ingestion
Not classified

Inhalation
May cause respiratory irritation.

Skin Contact
Mild irritant to rabbit skin. (ethyl 2-cyanoacrylate)

Eye Contact
Moderate irritant to rabbit eyes. (ethyl 2-cyanoacrylate)

Irritation
Skin Irrit. 2; Eye Irrit. 2 (ethyl 2-cyanoacrylate)

Corrosivity
Not classified.

Sensitisation
Not classified.

Repeated dose toxicity
Not classified.

Carcinogenicity
No evidence of carcinogenicity.
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Mutagenicity
Toxicity for reproduction

11.2 Other information
There is no evidence of mutagenic potential.
No data.
NTP: Not Listed
IARC Monographs: Not Listed
OSHA Regulated: Not Listed

12. SECTION 12: ECOLOGICAL INFORMATION
12.1 Toxicity
Not classified as a Marine Pollutant.
No data; Technically not possible.
The product has no potential for bioaccumulation.
The product is predicted to have low mobility in soil. (Insoluble in water.)
Not classified as PBT or vPvB.
None known.

13. SECTION 13: DISPOSAL CONSIDERATIONS
13.1 Waste treatment methods
Dispose of contents in accordance with local, state or national legislation.

13.2 Additional Information
None.

14. SECTION 14: TRANSPORT INFORMATION
Not classified as dangerous for transport. Except for Air transport

14.1 UN number
14.2 Proper Shipping Name
14.3 Transport hazard class(es)
14.4 Packing group
14.5 Environmental hazards
14.6 Special precautions for user
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
14.8 Additional Information
IATA
UN 3334
Aviation regulated liquid, n.o.s. (Cyanoacrylate ester)
9
III
Not classified as a Marine Pollutant. / Environmentally hazardous substance
May cause irritation to eyes, skin and air passages.
Not applicable.

Primary packs containg less than 500ml are unregulated by this mode of transport and may be shipped unrestricted.
Packaging Instructions (passenger): 906
Packaging Instructions (cargo): 906

15. SECTION 15: REGULATORY INFORMATION
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
None known.

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 ethyl 2-cyanoacrylate (CAS# 7085-85-0).

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classification of the substance or mixture according to regulation (ec) no. 1272/2008 (clp)

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>skin irrit. 2; h315</td>
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<tr>
<td>eye irrit. 2; h319</td>
</tr>
<tr>
<td>stot se 3; h335</td>
</tr>
</tbody>
</table>

**legend**

- ltel: long term exposure limit
- stel: short term exposure limit
- dnel: derived no effect level
- pnecl: predicted no effect concentration
- pbt: persistent, bioaccumulative and toxic
- vpvb: 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.

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**annex to the extended safety data sheet (esds)**

no information available.