

Safety Data Sheet

M-Bond 200 Adhesive

ACCORDING TO OSHA HCS (29 CFR 1910.1200)

Date of issue: 24/05/2024
Date of First Issue: 20/03/2012
Version 4.0

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

Product identifier

Product name M-Bond 200 Adhesive

Other means of identification

None

Relevant identified uses of the substance or mixture and uses advised against

Identified Use(s)

Adhesives.

Uses advised against

Anything other than the above.

Details of the supplier of the safety data sheet

VISHAY MEASUREMENTS GROUP, INC.

Post Office Box 27777

Raleigh, NC 27611

USA

Supplier

919-365-3800

Telephone

919-365-3945

E-mail (competent person)

mm.us@vpgsensors.com

Emergency telephone number

Emergency Phone No.

+1 800-262-8200 (for spills and releases)

CHEMTREC (24 hours)

Languages spoken

English

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture in accordance with paragraph (d) of 29 CFR 1910.1200

Physical hazards

Flammable Liquid, Category 4

health hazards

Skin corrosion/irritation, Category 2

Serious eye damage/irritation, Category 2

Specific target organ toxicity - Single exposure, Category 3 (Respiratory tract irritation)

Environmental hazards

Not classified as hazardous for supply/use.

Label elements

Hazard Pictogram(s)



Signal Word(s)

WARNING

Hazard Statement(s)

Combustible liquid.

Causes skin irritation.

Causes serious eye irritation.

May cause respiratory irritation.

Precautionary Statement(s)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Avoid breathing mist/vapours/spray.

Use only outdoors or in a well-ventilated area.

Wash hands and exposed skin thoroughly after handling.

Wear protective gloves and eye/face protection.

IF ON SKIN or hair: Take off immediately all contaminated clothing. Rinse skin with water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Call a POISON CENTER/doctor if you feel unwell.
 If eye irritation persists: Get medical advice/attention.
 If skin irritation occurs: Get medical advice/attention.
 Take off contaminated clothing and wash it before reuse.
 In case of fire: Use dry powder to extinguish.
 Store in a well-ventilated place. Keep container tightly closed.
 Store in a well-ventilated place. Keep cool.
 Store locked up.
 Dispose of contents in accordance with local, state or national legislation.

Other hazards

Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children.

Percent of the mixture consists of ingredient(s) of unknown acute toxicity:

0% of the mixture consists of ingredients of unknown acute inhaled toxicity.
 0% of the mixture consists of ingredients of unknown acute oral toxicity.
 0% of the mixture consists of ingredients of unknown acute dermal toxicity.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Not applicable

Mixtures Substances in preparations / mixtures.

Classification: OSHA HCS (29 CFR 1910.1200)

Chemical identity of the substance	%W/W	CAS No.	EC No.	Hazard classification
ethyl 2-cyanoacrylate	90 – 100	7085-85-0	230-391-5	Skin irritation, Category 2 Serious eye damage/irritation, Category 2 Specific target organ toxicity - Single exposure, Category 3 (Respiratory tract irritation)

SECTION 4: FIRST AID MEASURES



Description of first aid measures

Self-protection of the first aider

Obtain special instructions before use. Use personal protective equipment as required. Wear appropriate personal protective equipment, avoid direct contact. Ensure adequate ventilation. Avoid all contact. Contaminated clothing should be laundered before reuse. Do not breathe vapour.

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. If exposed or concerned: Get medical attention/advice.

Skin contact

IF ON SKIN: Wash with plenty of water. Take off contaminated clothing. If irritation develops and persists, 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.

Ingestion

IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

Most important symptoms and effects, both acute and delayed

Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children. May cause respiratory irritation. Causes serious eye irritation. Causes skin irritation.

Notes to a physician:

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

Indication of any immediate medical attention and special treatment needed

Notes to a physician:

IF ON 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 gauze 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.

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IF SWALLOWED:

The product will polymerise immediately in the mouth making it almost impossible to swallow. In the unlikely event of adhesive entering the mouth it will solidify on contact with the moisture in the mouth bonding directly on the surfaces in the mouth. Salvia will gradually debond the adhesive over a period of hours. Do not try to pull the polymerised adhesive from the mouth. Keep checking the mouth to ensure that the person doesn't swallow it when it detaches.

IF IN EYES:

In the event of the eyelids being bonded, wash thoroughly and gently with warm water and apply a gauze patch over the eye. Do not force the eye open. Cyanoacrylate will bond to the eye protein and will cause periods of weeping which will help to debond the adhesive. The eye will open without any further action in 1-3 days even if gross contamination has occurred. Double vision may be experienced during this period. There should be no residual damage to the eye.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

Unsuitable extinguishing media

Special hazards arising from the substance or mixture

Extinguish with carbon dioxide, dry chemical, foam or waterspray.

Do not use water jet.

Combustion or thermal decomposition will evolve toxic and irritant vapours. Carbon monoxide, Carbon dioxide, cyanide and Oxides of nitrogen. Vapours may ignite.

Advice for firefighters

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.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Avoid breathing vapours. Avoid all contact. In case of inadequate ventilation wear respiratory protection. Use personal protective equipment as required. See Section: 8.

Methods and material for containment and cleaning up

Ensure suitable personal protection during removal of spillages. 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.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Ensure adequate ventilation. Avoid breathing vapours. Avoid all contact. In case of inadequate ventilation wear respiratory protection. 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. Protect from moisture.

Conditions for safe storage, including any incompatibilities

storage temperature

Incompatible materials

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

Store at ambient temperature.

Keep away from: water, alcohols, acids, alkalis, peroxides.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

SUBSTANCE	CAS No.	LTCL (8 hr TWA ppm)	LTCL (8 hr TWA mg/m ³)	STEL (ppm)	STEL (mg/m ³)	Note	Source
Ethyl cyanoacrylate	7085-85-0	0.2	-	1	-	DSEN; RSEN	ACGIH

Source:

ACGIH: American Conference of Governmental Industrial Hygienists - Threshold limit values (TLV) 2021

Notes:

A4 - Not Classifiable as a Human Carcinogen

DSEN = Dermal Sensitization
RSEN = Respiratory Sensitization

Biological exposure indices

Not established

Appropriate engineering controls

Ensure adequate ventilation. Atmospheric levels should be controlled in compliance with the occupational exposure limit. A washing facility/water for eye and skin cleaning purposes should be present.

Individual protection measures, such as personal protective equipment

Obtain special instructions before use. General hygiene measures for the handling of chemicals are applicable. Keep good industrial hygiene. Avoid all contact. Avoid breathing vapours. Wash hands before breaks and after work. Keep work clothes separately. Do not eat, drink or smoke at the work place. IF exposed: Flush with fresh water if contact with skin or eyes.

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.

Eye / face protection



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

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 / Nitrile rubber.

Body protection:

For large quantities - Wear apron or other light protective clothing. Recommended: Polyethylene.

Respiratory protection



Use only in well-ventilated areas. In case of inadequate ventilation wear respiratory protection. For large quantities - Wear suitable respiratory protective equipment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Colourless Liquid
Odour	Pungent odour
Odour threshold	Not established
pH	Not established
Melting point/freezing point	Crystallisation@ -71 °C (Ethyl cyanoacrylate) Melting point@ -31 °C
Initial boiling point and boiling range	214 °C (Ethyl cyanoacrylate)
Flash point	150 - 200 °F (65.6 – 93.3 °C)
Evaporation rate	Not established
Flammability (solid, gas)	Not established
Upper/lower flammability or explosive limits	Not established
Vapour pressure	Not established
Vapour density	Not established
Relative density	1.043 (Ethyl cyanoacrylate)
Solubility(ies)	Insoluble in water
Partition coefficient: n-octanol/water	Not established
Auto-ignition temperature	480 °C (Ethyl cyanoacrylate)
Decomposition temperature	Not established
Viscosity	Not established

Other information

Explosive properties

None Known

Not explosive.

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Stable under normal conditions.

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Chemical stability
Possibility of hazardous reactions
Conditions to avoid
Incompatible materials
Hazardous decomposition products

Stable under normal conditions.
May polymerise on exposure to moisture.
Protect from moisture.
Keep away from: water, alcohols, acids, alkalis, peroxides.
May decompose in a fire giving off toxic fumes. Carbon monoxide, Carbon dioxide, cyanide and Oxides of nitrogen.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity - Ingestion

Mixture: Based upon the available data, the classification criteria are not met.
Calculated acute toxicity estimate (ATE) >2,000 mg/kg.

Acute toxicity - inhalation

Mixture: Based upon the available data, the classification criteria are not met.
Calculated acute toxicity estimate (ATE) >2,000 mg/kg.

Acute toxicity - Skin contact

Mixture: Based upon the available data, the classification criteria are not met.
Calculated acute toxicity estimate (ATE) > 5 mg/L (Dusts)

Skin corrosion/irritation

Ethyl cyanoacrylate Skin corrosion/irritation, Category 2: Causes skin irritation. EU Harmonised Classification

Irritating to skin. (rabbit) (OECD 404)

Serious eye damage/irritation

Mixture: Serious eye damage/irritation, Category 2 : Causes serious eye irritation.

Ethyl cyanoacrylate Serious eye damage/irritation, Category 2 : Causes serious eye irritation. EU Harmonised Classification

Irritating to eyes. (OECD 405)

Respiratory or skin sensitisation

Mixture: Based upon the available data, the classification criteria are not met.

Germ cell mutagenicity

Mixture: Based upon the available data, the classification criteria are not met.

Carcinogenicity

Mixture: Based upon the available data, the classification criteria are not met.

Reproductive toxicity

Mixture: Based upon the available data, the classification criteria are not met.

STOT - single exposure

Mixture: Specific target organ toxicity - Single exposure, Category 3 (Narcotic effects :May cause respiratory irritation.

Ethyl cyanoacrylate Mixture: Specific target organ toxicity - Single exposure, Category 3 (Narcotic effects :May cause respiratory irritation.

EU Harmonised Classification

STOT - repeated exposure

Mixture: Based upon the available data, the classification criteria are not met.

Aspiration hazard

Mixture: Based upon the available data, the classification criteria are not met.

Information on likely routes of exposure

Inhalation

Possible – accidental exposure

Ingestion

Unlikely – accidental exposure

Skin contact

Possible – accidental exposure

Eye contact

Possible – accidental exposure

Early onset symptoms related to exposure

None Known

Delayed health effects from exposure

May cause respiratory irritation. Causes serious eye irritation. Causes skin irritation. Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children.

Exposure levels and health effects

See Section: 8

Interactive effects

None Known

Other information

OSHA Designated Carcinogen

All chemicals are not listed

NIOSH Occupational Carcinogen List

All chemicals are not listed

NTP Report on Carcinogens

All chemicals are not listed

IARC Monographs

All chemicals are not listed

SECTION 12: ECOLOGICAL INFORMATION

Toxicity	Mixture: Based upon the available data, the classification criteria are not met.
Persistence and degradability	No data for the mixture as a whole.
Ethyl 2-cyanoacrylate	No data: Technically not possible. substance polymerises on contact with water EU ECHA registration dossier
Bioaccumulative potential	No data for the mixture as a whole.
Ethyl 2-cyanoacrylate	No data: Technically not possible. substance polymerises on contact with water EU ECHA registration dossier
Mobility in soil	No data for the mixture as a whole.
Ethyl 2-cyanoacrylate	No data: Technically not possible. substance polymerises on contact with water EU ECHA registration dossier
Other adverse effects	None Known

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods	This material and its container must be disposed of as hazardous waste. Dispose of wastes in an approved waste disposal facility.
Packaging waste	Disposal should be in accordance with local, state or national legislation.

SECTION 14: TRANSPORT INFORMATION

Not classified as dangerous for transport. Except for Air transport

	Road/rail (ADR/RID)	Sea transport (IMDG)	Air (ICAO/IATA)
UN number	Not classified	Not classified	UN 3334
UN proper shipping name	Not classified	Not classified	Aviation regulated liquid, n.o.s. (Cyanoacrylate ester) Not subject to ADR.
Transport hazard class(es)	Not classified	Not classified	9
Packing group	Not classified	Not classified	III
Environmental hazards	Not classified as a Marine Pollutant. / Environmentally hazardous substance		
Special precautions for user	See Section: 2		
Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable		
Additional information	Primary packs containing less than 500ml are unregulated by this mode of transport and may be shipped unrestricted. Packaging instructions (passenger): 906 Packaging instructions (cargo): 906		

SECTION 15: REGULATORY INFORMATION

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

US Federal Regulations

TSCA Chemical Data Reporting (CDR) Rule Ethyl cyanoacrylate: Subject to 25,000lb reporting threshold

NIOSH Occupational Carcinogen List

All chemicals are not listed

EPCRA Section 313

All chemicals are not listed

CWA 307- Toxic

All chemicals are not listed

CERCLA - Hazardous Substances

All chemicals are not listed

CWA Section 311 List of Hazardous Substances

All chemicals are not listed

USDOT - 01. Marine Pollutants List

All chemicals are not listed

NTP Report on Carcinogens

All chemicals are not listed

US State Regulations

California (CA) Biological monitoring

All chemicals are not listed

Proposition 65 (California)

All chemicals are not listed

California (CA) SCPR

All chemicals are not listed

Maine State

All chemicals are not listed

Massachusetts, New Jersey, Pennsylvania, Rhode

All chemicals are not listed

Island- State Right to Know Lists

New Jersey State Worker and Community RTK Act

Ethyl cyanoacrylate listed (RTKHSL. SHSL)

New York -State Right to Know Lists

All chemicals are not listed

Minnesota - State Right to Know Lists

All chemicals are not listed

Massachusetts – Toxic Use reduction act

All chemicals are not listed

Rhode Island State - Hazardous substances RTK Act

All chemicals are not listed

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Non-Regional
IARC Monographs

All chemicals are not listed

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: V4.0 - Updated version and date

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This Safety Data Sheet was prepared in accordance with US Regulation OSHA HCS (29 CFR 1910.1200)

References:

Harmonised Classification(s) for Ethyl 2-cyanoacrylate (CAS No. 7085-85-0).
Existing ECHA registration(s) for Ethyl 2-cyanoacrylate (CAS No. 7085-85-0).

Legend

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS	CAS: Chemical Abstracts Service
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CWA	Clean Water Act
IATA	International Air Transport Association
IARC	International Agency for Research on Cancer
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
LC50	Lethal concentration at which 50% of the population is killed
LD50	Lethal dose at which 50% of the population is killed
MARPOL	The International Convention for the Prevention of Pollution from Ships
NTP	National Toxicology Program
OSHA	The Occupational Safety & Health Administration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
TSCA	Toxic Substance Control Act
UN	United Nations
US EPA	United States Environmental Protection Agency

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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