

SAFETY DATA SHEET

Version: 1.0
Date of Issue: 25 May 2018
Date of First Issue: 25 May 2018

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In accordance with Schedule 1 of Hazardous Products Regulations (HPR) (WHMIS 2015)

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

Recommended use and restrictions

Recommended use Adhesives.
Restrictions on use None known.

Initial Supplier Identifier

Company Identification VISHAY MEASUREMENTS GROUP, INC.
Telephone Post Office Box 27777
Raleigh, NC 27611
USA
E-Mail (competent person) mm.us@vishaypg.com

Emergency telephone number

Emergency Phone No. 1-800-424-9300 CHEMTREC (24 hours)
Languages spoken English

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

In accordance with Schedule 1 of Hazardous Products Regulations (HPR) (WHMIS 2015) Skin corrosion/irritation - Category 2
Eye Irritation - Category 2
Specific target organ toxicity — single exposure, Category 3

Label elements

Hazard Pictogram(s)



Signal Word(s)

WARNING

Hazard Statement(s)

Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.

Precautionary Statement(s)

Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN: Wash with plenty of water.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Take off contaminated clothing and wash it before reuse.
IF exposed or concerned: Get medical advice/attention.
Store in a well-ventilated place. Keep container tightly closed.
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.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substances Not applicable

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Mixtures

GHS Classification

Chemical Name	CAS No.	Concentration (%W/W)	Common name(s), synonym(s) of the substance	Hazard classification
Ethyl cyanoacrylate	7085-85-0	80 - 100	2-Propenoic acid, 2-cyano-, ethyl ester; ethyl 2-cyanoprop-2-enoate	Skin corrosion/irritation - Category 2 Eye Irritation - Category 2 Specific target organ toxicity — single exposure - Category 3 (Respiratory tract) Specific Concentration Limit Specific target organ toxicity — single exposure - Category 3: C ≥ 10%
2-Propenoic acid, 2-methyl-, methyl ester, homopolymer*	9011-14-7	10 - 30	Polymethylmethacrylate	Not classified

Prescribed Concentration Ranges used for trade secret purposes (Canada Gazette, Part II, Vol. 152, No. 8)

* See Section: 15

SECTION 4: FIRST AID MEASURES



Description of first aid measures

Self-protection of the first aider

Use personal protective equipment as required. Wear appropriate personal protective equipment, avoid direct contact. Ensure adequate ventilation. Avoid breathing vapours. Avoid contact with skin and eyes.

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

Skin Contact

IF ON SKIN: Wash with plenty of water. Take off contaminated clothing. 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. Immediately call a POISON CENTER/doctor.

Ingestion

IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Call a POISON CENTER/doctor if you feel unwell.

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.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

IF ON SKIN (or hair): 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.

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.

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

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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 cheking the mouth to ensure that the person doesn't swallow it when it detaches.

SECTION 5: FIRE-FIGHTING MEASURES

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.

Special hazards arising from the substance or mixture

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

Special protective equipment and precautions 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.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

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

Environmental precautions

Avoid release to the environment. Do not allow to enter drains, sewers or watercourses.

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.

Reference to other sections

See Section: 8, 13

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Ensure operatives are trained to minimise exposures. Ensure adequate ventilation. Avoid breathing vapours. Avoid contact with skin and eyes. In case of insufficient ventilation, wear suitable respiratory equipment. 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

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

Storage temperature

Ambient. < 24°C.

Incompatible materials

Keep away from: Water, Alcohols, Acids, Alkalis, Peroxides.

Specific end use(s)

See Section: 1.2

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational Exposure Limits

Alberta: Occupational Health And Safety Code, 2009

SUBSTANCE	CAS No.	8-hour Occupational Exposure Limits			15-minute or ceiling (c) Occupational Exposure Limits		Note
		ppm	mg/m ³	f/cc	STEL (ppm)	STEL (mg/m ³)	
Ethyl cyanoacrylate	7085-85-0	0.2	1	-	-	-	Alberta

Source: Alberta: Occupational Health And Safety Code, 2009

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British Columbia: Occupational Health and Safety Guidelines, 2015; Northwest Territories: Occupational Health and Safety Regulations, 2012

SUBSTANCE	CAS No.	LEL (8 hr TWA ppm)	LEL (8 hr TWA mg/m ³)	STEL (ppm)	STEL (mg/m ³)	Note
Ethyl cyanoacrylate	7085-85-0	0.2	-	-	-	WEL
		0.2	-	0.6	-	NW

Source: WEL: Occupational Health and Safety Guidelines Part 5: Chemical Agents and Biological Agents (British Columbia)

NW: WSCC, Occupational Health and Safety Regulations, Northwest Territories Volume 3

Saskatchewan: Occupational Health and Safety Regulations, 1996

SUBSTANCE	CAS No.	Time Weighted Average (TWA)	STEL (ppm)	Note
Ethyl cyanoacrylate	7085-85-0	0.2	0.6	WEL

Source: Saskatchewan (SK): Occupational Health and Safety Act, 1993. O-1.1 REG 1 Occupational Health and Safety Regulations, 1996.

Biological limit value

Not established.

Exposure controls

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 (PPE)

General hygiene measures for the handling of chemicals are applicable. Keep good industrial hygiene. Avoid contact with skin and eyes. 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.

Eye/face protection



Wear protective eye glasses for protection against liquid splashes.
Recommended: Eye protection with side protection

Skin protection



Hand protection:

Wear impervious gloves. 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:

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

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

Odour

Odour threshold

pH

Melting point/freezing point

Initial boiling point and boiling range

Flash point

Physico-chemical properties of substance Ethyl cyanoacrylate

Clear Liquid

Pungent Odour

Not available.

Not established.

-31°C (EU Method A.1)

214°C (EU Method A.2)

82.5°C [Closed cup] (EU Method A.9)

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Evaporation rate (Water = 1)	Not established.
Flammability (solid, gas)	Not applicable - Liquid
Upper/lower flammability or explosive limits	Not available.
Vapour pressure	<21 Pa @ 20°C
Vapour density	>1 (Air = 1)
Relative density	1.043 (EU Method A.3)
Solubility(ies)	24 µg/L in Water (EU Method A.6)
Partition coefficient: n-octanol/water	0.776 (Log Pow).
Auto-ignition temperature	480°C (EU Method A.15)
Decomposition Temperature	Not available.
Viscosity	Not available.
Explosive properties	Not available.
Oxidising properties	Not oxidising.

Other information

Volatile Organic Compound Content: 1000 g/L

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Stable under normal conditions.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	May polymerise on exposure to moisture.
Conditions to avoid	Store at temperatures not exceeding (°C): 24°C. Protect from moisture.
Incompatible materials	Keep away from: Water, Alcohols, Acids, Alkalis, Peroxides.
Hazardous decomposition product(s)	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	Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LC50 > 2000 mg/kg bw/day.
Acute toxicity - Inhalation	Based upon the available data, the classification criteria are not met. Acute Toxicity Estimate Mixture Calculation: Estimated LC50 >20.0 mg/l.
Acute toxicity - 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	Skin corrosion/irritation - Category 2: Causes skin irritation.
Ethyl cyanoacrylate	Skin corrosion/irritation - Category 2 Irritating to skin. (rabbit) (OECD 404)
Serious eye damage/irritation	Eye Irritation - Category 2: Causes serious eye irritation.
Ethyl cyanoacrylate	Eye Irritation - Category 2 Irritating to eyes. (rabbit) (OECD 405)
Respiratory or skin sensitization	Based upon the available data, the classification criteria are not met.
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	Specific target organ toxicity — single exposure, Category 3: May cause drowsiness or dizziness.
Ethyl cyanoacrylate	Specific target organ toxicity — single exposure, Category 3 No data - Harmonised Classification
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.
Other information	None known.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity	Based upon the available data, the classification criteria are not met.
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Persistence and degradability

Bioaccumulative potential

Mobility in soil

Other adverse effects

Estimated Mixture LC50 > 100 mg/l

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).

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

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.

SECTION 14: TRANSPORT INFORMATION

	ADR/RID	IMDG	IATA/ICAO
14.1 UN number	N/A	UN 3334	UN 3334
14.2 UN proper shipping name	Not subject to ADR.	Aviation regulated liquid, n.o.s. (Cyanoacrylate ester) Not subject to ADR.	Aviation regulated liquid, n.o.s. (Cyanoacrylate ester) Not subject to ADR.
14.3 Transport hazard class(es)	Not classified	9	9
14.4 Packing group	Not classified	III	III
14.5 Environmental hazards	Not classified	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 MARPOL73/78 and the IBC Code	Not applicable		

SECTION 15: REGULATORY INFORMATION

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

National regulations

CEPA, Domestic Substances List

CEPA, Priority Substances List

CEPA, List of Toxic Substances (Schedule 1)

CEPA, National Pollutant Release Inventory

CEPA, Environmental Emergency Regulations

Non-Regional

IARC Monographs, List of Classifications

Ethyl cyanoacrylate: Yes

2-Propenoic acid, 2-methyl-, methyl ester, homopolymer: Yes

All chemicals are not listed

All chemicals are not listed

All chemicals are not listed

All chemicals are not listed

2-Propenoic acid, 2-methyl-, methyl ester, homopolymer: IARC Classification: Group 3.

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: Not applicable – V1.0

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References:

Existing Safety Data Sheet (SDS).

EU: Harmonised Classification(s) for Ethyl cyanoacrylate (CAS No. 7085-85-0). Existing ECHA registration(s) for Ethyl cyanoacrylate (CAS No. 7085-85-0), and the Classification and Labelling Inventory for 2-Propenoic acid, 2-methyl-, methyl ester, homopolymer (CAS No. 9011-14-7).

LEGEND

LTEL: Long Term Exposure Limit

DNEL: Derived No Effect Level

STEL: Short Term Exposure Limit

PNEC: Predicted No Effect Concentration

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PBT: Persistent, Bioaccumulative and Toxic
IARC: International Agency for Research on Cancer
OSHA = Occupational Safety and Health Administration

vPvB: very Persistent and very Bioaccumulative
NTP: National Toxicology Program
NIOSH TIC: National Institute for Occupational Safety and Health Technical Information Center

ACGIH: American conference of Governmental Industrial Hygiene
TLV: Threshold Limit Value (ACGIH)
VOC: Volatile Organic Compound
CEPA (Canadian Environmental Protection Act)

BEI: Biological Exposure Indices (ACGIH)
TWA: Time Weighted Average
EU: European Union

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