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**MATERIAL SAFETY DATA SHEET**

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**Z-Bond(TM) 101 MEDIUM STRENGTH  
CYANOACRYLATE**Revision Date: 08/08/2005

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**1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY / UNDERTAKING**

- 1.1. PRODUCTS IDENTIFICATION:** Z-Bond(TM) 101 Medium Strength Cyanoacrylate
- 1.2. USE OF SUBSTANCE:** Information not supplied
- 1.3. COMPANY:** Z Corporation  
Z Corporation  
32 Second Avenue  
Burlington, MA 01803 USA
- 1.4. EMERGENCY TELEPHONE:** EMER 3035921711  
+1 781 852 5005

**2. HAZARDS IDENTIFICATION****EMERGENCY OVERVIEW  
HMIS**

Physical State:	Liquid	HEALTH:	2
Colour:	Clear colourless to straw	FLAMMIBILITY:	2
Odour:	Negligible	PHYSICAL HAZARD:	1
		Personal Protection:	See Section 8

**WARNING: BONDS SKIN IN SECONDS  
MAY CAUSE EYE AND RESPIRATORY  
IRRITATION  
COMBUSTIBLE LIQUID AND VAPOUR**

Relevant routes of exposure: Skin, Inhalation, Eyes

**Potential Health Effects:**

- Inhalation:** Exposure to vapors above the established exposure limit results in respiratory irritation which may lead to difficulty in breathing and tightness in the chest.
- Skin contact:** Bonds skin in seconds. May cause skin irritation. Cyanoacrylates have been reported to cause allergic reaction but due to rapid polymerization at the skin surface, an allergic response is rare. Cyanoacrylates generate heat on solidification. In rare circumstances a large drop will burn the skin. Cured adhesive does not present a health even if bonded to the skin.
- Eye contact:** Irritating to eyes. Causes excessive tearing. Eyelids may bond.
- Ingestion:** Not expected to be harmful by ingestion. Rapidly polymerizes (solidifies) and bonds in mouth. It is almost impossible to swallow.

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**Existing conditions:** Eye, skin, and respiratory disorders aggravated by exposure  
See Section 11 for additional toxicological information

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

<u>Hazardous components</u>	<u>%</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER</u>
Beta-Methoxyethyl cyanoacrylate 27816-23-5	60-100	None	None	0.2 ppm TWA

**4. FIRST-AID MEASURES****Inhalation:**

Remove to fresh air. If discomfort persists seek medical attention.

**Skin contact:**

Do not pull bonded skin apart. Soak in warm soapy water. Gently peel apart using a blunt instrument. If skin is burned due to the rapid generation of heat by a large drop, seek medical attention. If lips are bonded, apply warm water to the lips and encourage wetting and pressure from saliva in mouth. Peel or roll lips apart. Do not pull lips apart with direct opposing force.

**Eye contact:**

Immediately flush with plenty of water for at least 15 minutes. Get medical attention. If eyelids are bonded closed, release eyelashes with warm water by covering with a wet pad. Do not force eye open. Cyanoacrylate will bond to eye protein and will cause a lachrymatory effect which will help to debond the adhesive. Keep eye covered until debonding is complete. usually within 1-3 days. Medical attention should be sought in case solid particles of polymerized cyanoacrylate trapped behind the eyelid caused abrasive damage.

**Ingestion:**

Ensure breathing passages are not obstructed. The product will polymerize rapidly and bond to the mouth making it almost impossible to swallow. Saliva will separate any solidified product in several hours. Prevent the patient from swallowing any separated mass.

**Notes to physician:**

Surgery is not necessary to separate accidentally bonded tissues. Experience has shown that bonded tissues are best treated by passive, non-surgical first aid. If rapid curing has caused thermal burns they should be treated symptomatically after adhesive is removed.

**5. FIRE-FIGHTING MEASURES****Flash point:**

80°C (176°F) to 93.4°C (200°F) Tagliabue closed cup

**Autoignition temperature:**

Not determined

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**Flammable/Explosive limits-lower 'Yo:**

Not determined

**Flammable/Explosive limits-upper 'Yo:**

Not determined

**Extinguishing media:**

Dry powder. Foam. Carbon dioxide.

**Special fire fighting procedures:**

Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA).

**Unusual fire or explosion hazards:**

None

**Hazardous combustion products:**

Trace amounts of toxic and/or irritating fumes may be released and the use of breathing apparatus is recommended.

**6. ACCIDENTAL RELEASE MEASURES****Environmental precautions:**

Ventilate area. Prevent product from entering the drains.

**Clean-up methods:**

Do not use cloths for mopping up. Flood with water to complete polymerization and scrape off the floor. Cured material can be disposed of as non-hazardous waste

**7. HANDLING AND STORAGE****Handling:**

Avoid contact with eyes, skin and clothing. Avoid breathing vapor and mist. Wash thoroughly after handling. Avoid contact with fabric or paper goods. Contact with these materials may cause rapid polymerization which can generate smoke and strong irritating vapors, and cause thermal burns.

**Storage:**

Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

**Incompatible products:**

No special restrictions on storage with other products

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Engineering controls:**

Use positive down-draft exhaust ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.

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**Respiratory protection:**

Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

**Skin protection:**Use nitrile gloves and aprons as necessary to prevent contact.  
Do not use PVC, nylon or cotton.**Eye/face protection:**

Chemical splash goggles or safety glasses with side shields.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical state:	Liquid
Color:	Clear Colorless to Straw
Odor:	Negligible
Odor Threshold:	1-2 ppm
Vapor pressure:	Less than 0.2 mm Hg
Ph:	Not applicable
Boiling point/range:	Greater than 149°C (300°F)
Melting point/range:	Not determined
Specific gravity:	1.1 at 23.9°C (75°F)
Vapor density:	Approximately 3
Evaporation rate:	Not available
Solubility in water:	Polymerizes in presence of water
Partition coefficient (n-octanol/water):	Not applicable
	VOC content: Less than 2%; 20 g/L (California SCAQMD Method 316B) (estimated)

**10. STABILITY AND REACTIVITY****Stability:**

Stable under recommended storage conditions

**Hazardous polymerization:**

Rapid exothermic polymerization will occur in the presence of water, amines, alkalis and alcohols.

**Hazardous decomposition products:**

None

**Incompatibility:**

Water, amines, alkalis and alcohols.

**Conditions to avoid:**

Spontaneous polymerization

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**11. TOXICOLOGICAL INFORMATION**

Product toxicity data: Acute oral LD50 >5000mg/kg (rat)(estimated). Acute dermal LD50 >2000mg/kg (rabbit)(estimated).

**Carcinogen Status**

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Beta-Methoxyethyl cyanoacrylate 27816-23-5	No	No	No

Literature Referenced Target Organ & Other Health Effects

Hazardous Components	Health Effects/Target Organs
Beta-Methoxyethyl cyanoacrylate 27816-23-5	Allergen. Irritant

**12. ECOLOGICAL INFORMATION**

NOT KNOWN

**13. DISPOSAL CONSIDERATIONS**

Information provided is for unused product only.

Recommended method of disposal: Dispose of in accordance with Federal, State and local regulations.

EPA hazardous waste number: Not a RCRA hazardous waste.

**14. TRANSPORT INFORMATION**

U.S. Department of Transportation Ground (49 CFR):

Proper shipping name:	Combustible liquids, n.o.s. (Cyanoacrylate ester)
Hazard class or division:	Combustible liquid
Identification number:	NA 1993
Packing group:	None
Exceptions:	(Not more than 450 Liters) Unrestricted
Marine pollutant:	None

International Air Transportation (ICAD/IATA):

Proper shipping name: Aviation regulated liquids, n.o.s (Cyanoacrylate ester)

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Hazard class or division: 9  
Identification number: UN 3334  
Packing group: None  
Exceptions: (Not more than 500ml) Unrestricted

Water Transportation (IMD/IMDG):

Proper shipping name: Unrestricted  
Hazard class or division: None  
Identification number: None  
Packing group: None  
Marine pollutant: None

**15. REGULATORY INFORMATION**United States Reaulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.  
TSCA 5 (a) (2) SNUR: None.  
TSCA 12 (b) Export Notification: None.  
CERCLAISARA Section 302 EHS: None.  
CERCLAISARA Section 311/312: Immediate Health Hazard, Delayed Health Hazard, Fire, Reactive  
CERCLAISARA 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). None.  
California Proposition 65: No California Proposition 65 listed chemicals are known to be present.

Canada Reaulatory Information

CEPA DSUNDSL Status: All components are listed on or are exempt from listing on the Domestic Substances List.  
WHMIS hazard class: B.3, D.2.B

**16. OTHER INFORMATION**

This material safety data sheet contains changes from the previous version in sections: 9

Prepared by: Regulatory Affairs

DISCLAIMER: Not available

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