

# MATERIAL SAFETY DATA SHEET

Complies with Approved Code of Practice: Chemical (Hazard Information and Packaging for Supply) Regulations 2002 (UK) and European 91/155/EEC, 67/548/EEC, 1999/45/EC format, Australian NOHSC: 1008, 10005(1999), 2011(2003) and 2001/58/E, ANSI Standard Z400.1 and U.S. Federal OSHA Hazard Communication

## Section 1. Identification of Chemical Substance and Company

1.1. PRODUCTS IDENTIFICATION: Z-Bond™ 90

1.2. USE OF SUBSTANCE: Infiltrant

1.3. COMPANY: Z Corporation  
32 Second Ave.  
Burlington, MA 01803  
Contact Person: Manager of Technical Services  
Telephone Number: 781-852-5050  
**Foreign Contact:** +(45) 48 14 11 22  
Svanevang 2, 3450 Allerød, Denmark  
**Date of Preparation:** 6/08

1.4. EMERGENCY TELEPHONE: For Hazardous Materials Emergency  
Spill, Leak, Fire, Exposure or Accident  
Call CHEMTREC – Day or Night  
800-424-9300  
INTERNATIONAL, 703-527-3887  
(collect calls accepted)

## Section 2. Composition/Information of Ingredients

Substance is a mixture with following general composition:

Ingredients	Approximate % by weight	C.A.S. No.
Cyanoacrylate	90-100%	Trade Secret

## Section 3. Hazard Identification

### Potential Human Health Effects:

Bonds skin rapidly and strongly. Skin, eye and mucous membrane irritant. Prolonged and repeated overexposure to vapors may produce allergic reactions with asthma-like symptoms in sensitive individuals.

### Target Organs or Systems:

Skin, eyes, and mucous membranes.

### Route of Exposure:

Skin Contact: Can bond skin rapidly and strongly. Skin contact may cause burns and/or irritation.

Eye Contact: Can cause irritation.

Inhalation: May cause irritation.

Ingestion: May be harmful if swallowed.

**Signs and Symptoms of Exposure:****Acute:**

Skin Contact: Bonds skin rapidly and strongly. May cause burns and/or irritation.

Eye Contact: May cause irritation.

Inhalation: Vapors may cause mucous membrane irritation.

Ingestion: May be harmful if swallowed.

**Chronic:**

Inhalation: Prolonged or repeated overexposure may produce allergic reactions with asthma-like symptoms in sensitive individuals.

Skin Contact: Bonds skin rapidly and strongly. May cause burns and/or irritation.

Eye Contact: May cause irritation.

Ingestion: May be harmful if swallowed.

**Carcinogens:**

None of the components are listed as cancer agents based on current information.

**Potential Environmental Effects:**

Not readily biodegradable.

**Section 4. Emergency First Aid****Inhalation:**

Remove from area to fresh air. Seek medical attention if symptoms persist.

**Eye Contact:**

Immediately flush with plenty of water for at least 15 minutes. Get medical attention. If eyelids are stuck together or bonded to the eyeball, wash thoroughly with warm water and apply a gauze patch. Cyanoacrylate introduced into the eyes will attach itself to the eye protein and will cause lachrymatory effect which will help to debond the adhesive. Keep eye covered until debonding is complete, usually within 1-4 days. DO NOT try to open eyes by manipulation. Medical attention should be sought in case solid particles of polymerized cyanoacrylate trapped behind the eyelid caused abrasive damage.

**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. Saliva will lift the adhesive in ½ - 2 days.

**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.

**Section 5. Fire and Explosion Hazard**

**Flash point (Method Used) Flammable limits**  
>160°F

**LEL**

Not Established

**UEL**

Not Established

**Autoignition Temperature:** 485°C or 905°F

**Extinguishing Media:**

Use dry chemical, carbon dioxide or foam.

**Special Fire Fighting Procedures**

As with all fires, fire fighters should wear full protective gear including supplied air respirators.

**Unusual Fire & Explosion:**

Emits irritating vapors.

**Exposure Hazard(s):** Material: Irritant

## Section 6. Accidental Release Measures

### Procedures of Personal Precautions:

Wear respirator, chemical safety goggles, and chemical gloves.

### Environmental Precautions:

No significant environmental hazards identified. Contain spill to prevent spread into drains, sewers, water supplies, or soil.

### Methods of Cleaning Up:

Do not use cloths for mopping up. Flood area with water to polymerize (cure). Soak up with an inert absorbent.

### Waste Disposal Method:

Polymerize as above. Dispose of in accordance with all applicable federal, state and local environmental regulations. National or regional provisions may also be in force.

## Section 7. Storage and Handling

### Handling Precautions:

**User Exposure:** Avoid contact with skin and eyes. Avoid breathing vapors.

### Storage Precautions:

**Suitable:** Store out of direct sunlight at or below 72°F to preserve shelf life. For best results and maximum shelf life, store unopened containers refrigerated (4°C, 39°F) and use within one month after opening.

**Special Requirements:** Good standards of industrial and personal hygiene should be followed.

## Section 8. Exposure Controls & Personal Protection

### Exposure Limit Values:

The European Member States have different standards for the components in this preparation.

Component	IOELVs (UK)	ACGIH TLV	OSHA PEL	Manufacturer Exposure Limit
Cyanoacrylate	None	None	None	0.2 ppm

### Notations:

IOELVs = Indicative Occupational Exposure Limit Values  
TLV = Threshold Limit Value

TWA = time weighted average  
PEL = Permissible Exposure Limit  
STEL = Short Term Exposure Limit

### Exposure Controls:

#### Ventilation Controls:

Use mechanical ventilation to maintain airborne levels below exposure limits.

#### Respiratory Protection:

Respirators are generally not needed under normal conditions of use. An air-purifying respirator equipped with organic vapor cartridges with an particulate prefilter may be necessary for spray applications or other situations such as high temperature use which may produce inhalation exposures.

#### Protective Gloves:

Avoid skin contact by use of chemical resistant gloves such as polyethylene or nitrile.

#### Eye Protection:

When directly handling liquid product, chemical safety goggles should be worn.

**Skin Protection:**

Avoid all skin contact. Depending on the conditions of use, cover as much of the exposed skin area as possible by wearing gloves, aprons, long pants, and long sleeved shirts.

**Other Controls:**

Safety shower and eyewash. Always use good personal hygiene and housekeeping practices. Wash thoroughly after handling.

**Environmental Exposure Controls:**

This product is not known to contain chemical components requiring specific environmental exposure controls.

**Section 9. Physical & Chemical Properties**

**Appearance:** Liquid

**Color:** Colorless

**Odor:** Slight

**Solubility in Water:** Polymerized by water

**VOC coefficient:** <3%

**Boiling Point (C°):** >210<sup>0</sup>F

**Specific Gravity:** 1.1

**Vapor Pressure (MM Hg):** >0.5mmHg

**Vapor Density:** >1

**Section 10. Stability and Reactivity**

**Stability:** Stable

**Conditions to Avoid:** Not available

**Materials to Avoid: Incompatible:** Polymerized by contact with water, alcohols, amines, alkalines

**Hazardous Decomposition Products:** None

**Section 11. Toxicological Information**

Acute oral LD50 >5000 mg/kg (rat) (estimated)

Acute dermal LD50 >2000 mg/kg (rabbit) (estimated)

**Section 12. Ecological Information**

No data available.

**Section 13. Disposal Considerations**

Polymerize with water. Incinerate or solid adhesive can be land filled in accordance with all applicable federal, state, and local environmental regulations.

**Section 14. Transportation 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: NA1993

Packing group: None

*Exceptions:* (Not more than 450 liters) Unrestricted

Marine pollutant: None

**International Air Transportation (ICAO/IATA):**

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

Hazard class division: 9

Identification number: UN 3334

Packing group: None

*Exceptions:* (Not more than 500 ml) Unrestricted

**Water Transportation (IMO/IMDG):**

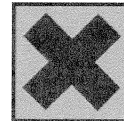
Proper shipping name: Unrestricted  
 Hazard class or division: None  
 Identification number: None  
 Packing group: None  
 Marine pollutant: None

**Section 15. Regulatory Information**

The following provides a summary of the legal requirements.

Ingredient	EPA TSCA	CA Prop 65	European Economic Community (EEC)				Canada Regs	
			EINECS	European Community Standards	Listed as dangerous chemicals	EEC Symbol	DSL	NPRI
1. Cyanoacrylate	Yes	No	Yes	None	No	Xi	Yes	No

DSL = Canadian Domestic Substance List  
 NPRI = National Pollutant Release Inventory

**Relevant Risk and Safety Phrases for the Mixture:****Xi - Risk Phrases:**

R36/37/38 – Irritating to eyes, respiratory system and skin

**Safety Phrases:**

S23: Do not breathe vapor

S24/25 Avoid contact with skin and eyes

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical services

Pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986, (SARA) and 40 CFR 372 Part 372, this product does not contain chemicals subject to the reporting requirements under Section 313.

All ingredients of this product are included in the U.S. Environmental Protection Agency's Toxic Substances Control Act Chemical Substance Inventory (TSCA).

This product contains hydroquinone which is subject to the reporting requirements under the Canadian National Pollutant Release Inventory (NPRI).

California Proposition 65: This product does not contain chemicals which are known to the state of California to cause cancer.

**Section 16. Other Information**

**HMIS (Hazardous Materials Information System) for secondary labeling:**

Health 2

Fire Hazard 2

Physical Hazard 2

Personal Protective Equipment B

## References

- 1) 2008 Threshold Limit Values and Biological Exposure Indices. American Conference of Governmental Industrial Hygienists.
- 2) MSDS + Cheminfo, Canadian Centre for Occupational Health and Safety
- 3) SAX'S Dangerous Properties of Industrial Materials, Tenth Edition
- 4) TSCA & SARA Title III by the U.S. Environmental Protection Agency and the National Technical Information Services
- 5) Raw Material Manufacturers Material Safety Data Sheets
- 6) US National Institute of Medicines Toxnet current 2008

Z Corporation believes the information and recommendations contained herein to be accurate and reliable. However, no liability whatsoever is assumed for the accuracy or completeness of the information contained herein. Final determination of occupational safety and health and environmental compliance and suitability of this material is the sole responsibility of the user. All materials may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. Z Corporation assumes no obligation or liability for such information and recommendations and does not guarantee results from use of product described or other information contained herein.