

**Safety Data Sheet**  
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 06.06.2015

Page 1 of 7

**Z-Bond™**

**SECTION 1 : Identification of the substance/mixture and of the supplier**

**Product name:** Z-Bond™

**Manufacturer/Supplier Trade name:**

**Manufacturer/Supplier Article number:** 93407

**Recommended uses of the product and restrictions on use:**

**Manufacturer Details:**

Danville Materials  
3420 Fostoria Way Suite a200  
San Ramon, CA 94583

**Supplier Details:**

Danville Materials  
3420 Fostoria Way Suite a200  
San Ramon, CA 94583

**Emergency telephone number:**

ChemTrec Inc 1-800-424-9300,703-527-3887 (CHEMTREC)

**SECTION 2 : Hazards identification**

**Classification of the substance or mixture:**



**Irritant**

Skin irritation, category 2  
Eye irritation, category 2A  
Skin sensitization, category 1



**Flammable**

Flammable liquids, category 2

Skin Irritation - Category 2.

Eye Irritation - Category 2.

Skin Sensitiser - Category 1.

Flammable Liquid - Category 2.

**Signal word:** Danger

**Hazard statements:**

Highly flammable liquid and vapor. Causes skin irritation.

May cause an allergic skin reaction.

Causes serious eye irritation.

**Precautionary statements:**

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use. Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Contaminated work clothing should not be allowed out of the workplace.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/light/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Wear protective gloves/protective clothing/eye protection/face protection.

Wash skin thoroughly after handling.

# Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 06.06.2015

Page 2 of 7

## Z-Bond™

Avoid breathing dust/fume/gas/mist/vapors/spray. If eye irritation persists get medical advice/attention.  
Eliminate all ignition sources if safe to do so.

IF ON SKIN (or hair): Immediately remove/take off all contaminated clothing. Rinse skin with water/shower.

In case of fire: Use agents recommended in section 5 for extinction.

Specific treatment (see supplemental first aid instructions on this label).

If skin irritation or a rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.

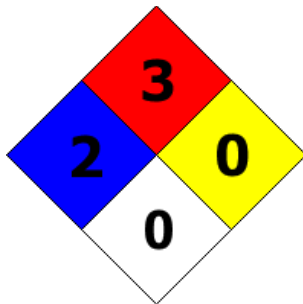
Continue rinsing. Store in a well ventilated place. Keep cool. Dispose of contents and container as instructed in Section 13.

### Other Non-GHS Classification:

#### WHMIS



#### NFPA/HMIS



NFPA SCALE (0-4)

Health	2
Flammability	3
Physical Hazard	0
Personal Protection	X

HMIS RATINGS (0-4)

### SECTION 3 : Composition/information on ingredients

Ingredients:		
CAS 64-17-5	Ethyl Alcohol	60-80 %
CAS 51156-91-3	Pyromellitic Dimethacrylate	5-20 %
CAS 868-77-9	2-Hydroxyethyl methacrylate	1-10 %
CAS 1565-94-2	Bisphenol A Glycidyl Methacrylate	1-10 %
CAS 1984-15-2	10-Methacryloyl-oxydecyl-dihydrogenphosphate	1-10 %
CAS 107665-59-8	Glycerol Dimethacrylate/Succinate	1-10 %

Percentages are by weight

### SECTION 4 : First aid measures

#### Description of first aid measures

**After inhalation:** Loosen clothing as necessary and position individual in a comfortable position. Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Get medical assistance if cough or other symptoms appear. Vapors may cause drowsiness and dizziness.

**After skin contact:** Rinse/flush exposed skin gently using soap and water for 15-20 minutes. Seek medical

**Z-Bond™**

advice if discomfort or irritation persists.

**After eye contact:** Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek medical attention if irritation persists or if concerned.

**After swallowing:** Rinse mouth thoroughly. Do not induce vomiting. Seek medical attention if irritation, discomfort, or vomiting persists. Never give anything by mouth to an unconscious person. Drink two glasses of water or milk. Seek medical attention if a substantial amount has been ingested.

**Most important symptoms and effects, both acute and delayed:**

Irritation. Headache. Nausea. Shortness of breath. Repeated exposure may cause skin dryness or cracking.

**Indication of any immediate medical attention and special treatment needed:**

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

**SECTION 5 : Firefighting measures**

**Extinguishing media**

**Suitable extinguishing agents:** Dry chemical powder, foam or carbon dioxide.

**For safety reasons unsuitable extinguishing agents:** None identified. Water spray or jet may prove ineffective and/or may cause fire to spread.

**Special hazards arising from the substance or mixture:**

Combustion products may include carbon oxides or other toxic vapors. Dangerous fire hazard when exposed to heat, sparks and open flames.

**Advice for firefighters:**

**Protective equipment:** Wear protective eyewear, gloves, and clothing. Refer to Section 8. Use NIOSH-approved respiratory protection/breathing apparatus. Use spark-proof tools and explosion-proof equipment.

**Additional information (precautions):** Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols.

**SECTION 6 : Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:**

Ensure adequate ventilation. Ensure that air-handling systems are operational.

**Environmental precautions:**

Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

**Methods and material for containment and cleaning up:**

Wear protective eyewear, gloves, and clothing. Refer to Section 8. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Always obey local regulations. Containerize for disposal. Refer to Section 13. If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Keep in suitable closed containers for disposal. Dam spill and collect with sand, silicagel or other absorbent non-flammable material and place in suitable waste containers. Ventilate area of leak or spill.

**Reference to other sections:**

None

**SECTION 7 : Handling and storage**

**Precautions for safe handling:**

Avoid contact with skin, eyes, and clothing. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Follow proper disposal methods. Refer to Section 13. Do not eat, drink, smoke, or use personal products when handling chemical substances. Take precautions against static discharge.

**Conditions for safe storage, including any incompatibilities:**

# Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 06.06.2015

Page 4 of 7

## Z-Bond™

Store in a cool location. Keep away from food and beverages. Protect from freezing and physical damage. Provide ventilation for containers. Keep container tightly sealed. Store away from incompatible materials. Avoid storage near extreme heat, ignition sources or open flame. Avoid high light intensity ambient light (>10000 lux). Store Z-Bond at 2°C/36°F - 25°C/77°F, out of sunlight.

### SECTION 8 : Exposure controls/personal protection



#### Control Parameters:

64-17-5, Ethanol, ACGIH TLV: 1000 ppm STEL.  
64-17-5, Ethanol, NIOSH: 3300 ppm IDLH (10% LEL).  
64-17-5, Ethanol, OSHA PEL: 1000 ppm TWA; 1900 mg/m<sup>3</sup> TWA.

**Appropriate Engineering controls:** Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

**Respiratory protection:** Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.

**Protection of skin:** Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.

**Eye protection:** Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses or goggles are appropriate eye protection.

**General hygienic measures:** Perform routine housekeeping. Wash hands before breaks and at the end of work. Avoid contact with skin, eyes, and clothing. Before wearing wash contaminated clothing.

### SECTION 9 : Physical and chemical properties

<b>Appearance (physical state,color):</b>	Slightly yellow liquid	<b>Explosion limit lower: Explosion limit upper:</b>	3.5% 15.0%
<b>Odor:</b>	Ethanol-Like	<b>Vapor pressure:</b>	Not Determined
<b>Odor threshold:</b>	Not Determined	<b>Vapor density:</b>	1.6g/cm <sup>3</sup>
<b>pH-value:</b>	2.8	<b>Relative density:</b>	0.8g/cm <sup>3</sup>
<b>Melting/Freezing point:</b>	-114.5°C	<b>Solubilities:</b>	Miscible in water.
<b>Boiling point/Boiling range:</b>	78°C	<b>Partition coefficient (n-octanol/water):</b>	Not Determined

# Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 06.06.2015

Page 5 of 7

## Z-Bond™

<b>Flash point (closed cup):</b>	13°C	<b>Auto/Self-ignition temperature:</b>	425°C
<b>Evaporation rate:</b>	Not Applicable	<b>Decomposition temperature:</b>	Not Determined
<b>Flammability (solid,gaseous):</b>	Highly flammable	<b>Viscosity:</b>	a. Kinematic: Not Determined b. Dynamic: Not Determined
<b>Density:</b> Not Determined			

### SECTION 10 : Stability and reactivity

**Reactivity:** Nonreactive under normal conditions.

**Chemical stability:** Stable under normal conditions.

**Possible hazardous reactions:** None under normal processing.

**Conditions to avoid:** Incompatible materials. Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Avoid high light intensity ambient light (>10000 lux).

**Incompatible materials:** Strong acids, bases, and oxidizing agents.

**Hazardous decomposition products:** Thermal decomposition or burning may produce carbon monoxide, carbon dioxide, hydrogen, and irritating gases.

### SECTION 11 : Toxicological information

<b>Acute Toxicity:</b>		
<b>Inhalation:</b>	64-17-5	LC50 Rat 124.7 mg/L 4 h (Source: OECD_SIDS)
<b>Oral:</b>	64-17-5	LD50 Rat 7060 mg/kg (Source: NLM_CIP)
<b>Chronic Toxicity:</b> No additional information.		
<b>Corrosion Irritation:</b> No additional information.		
<b>Sensitization:</b>	No additional information.	
<b>Single Target Organ (STOT):</b>	No additional information.	
<b>Numerical Measures:</b>	No additional information.	
<b>Carcinogenicity:</b>	No additional information.	
<b>Mutagenicity:</b>	No additional information.	
<b>Reproductive Toxicity:</b>	No additional information.	

### SECTION 12 : Ecological information

#### Ecotoxicity

**64-17-5:** 96 Hr LC50 *Oncorhynchus mykiss*: 12.0 - 16.0 mL/L [static]; 96 Hr LC50 *Pimephales promelas*: >100 mg/L [static]; 96 Hr LC50 *Pimephales promelas*: 13400 - 15100 mg/L [flow-through]

**64-17-5:** 48 Hr LC50 *Eisenia foetida*: 0.1 - 1 mg/cm<sup>2</sup> [filter paper]

**Persistence and degradability:** Not determined.

**Bioaccumulative potential:** Not determined.

**Mobility in soil:** Not determined.

**Z-Bond™**

**Other adverse effects:** None identified.

**SECTION 13 : Disposal considerations**

**Waste disposal recommendations:**

Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers as unused product. Product or containers must not be disposed with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

**SECTION 14 : Transport information**

**UN-Number**

1170

**UN proper shipping name**

Ethanol Mixture

**Transport hazard class(es)**



**Class:**

3 Flammable liquids

**Packing group:** II

**Environmental hazard:** None

**Transport in bulk:**

**Special precautions for user:** None

**SECTION 15 : Regulatory information**

**United States (USA)**

**SARA Section 311/312 (Specific toxic chemical listings):**

Acute, Fire

**SARA Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

**RCRA (hazardous waste code):**

None of the ingredients are listed.

**TSCA (Toxic Substances Control Act):**

All ingredients are listed.

**CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):**

None of the ingredients are listed.

**Proposition 65 (California):**

**Chemicals known to cause cancer:**

None of the ingredients are listed.

**Chemicals known to cause**

**reproductive toxicity for females:**

None of the ingredients are listed.

**Chemicals known to cause reproductive toxicity for males:**

**Z-Bond™**

None of the ingredients are listed.

**Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

Canada

**Canadian Domestic Substances List (DSL):**

All ingredients are listed.

**Canadian NPRI Ingredient Disclosure list (limit 0.1%):**

None of the ingredients are listed.

**Canadian NPRI Ingredient Disclosure list (limit 1%):**

None of the ingredients are listed.

**SECTION 16 : Other information**

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

**GHS Full Text Phrases:**

None

**Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

PNEC: Predicted No-Effect Concentration (REACH)

CFR: Code of Federal Regulations (USA)

SARA: Superfund Amendments and Reauthorization Act (USA)

RCRA: Resource Conservation and Recovery Act (USA)

TSCA: Toxic Substances Control Act (USA)

NPRI: National Pollutant Release Inventory (Canada)

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

DNEL: Derived No-Effect Level (REACH)

**Effective date:** 06.06.2015

**Last updated:** 06.17.2015