



**Material Safety Data Sheet
ZeraBond Type 3 PART A**

PRODUCT INFORMATION

Manufacturer: Zeraus Products Inc.
250 Rayette Road, Unit 18
Vaughan, Ontario L4K 2G6

PRODUCT INFORMATION

Product Identifier: ZeraBond Type 1 Part A

Application and Use: Epoxy adhesive gel and crack filler for concrete repair.

Product Description: Two component clear epoxy adhesive gel (epoxy resin blends)

HAZARD RATING SYSTEM (USA):

Health: 2

Flammability: 0

Reactivity: 0

WHMIS Classification (Canada):

Class D, Division 2, Subdivision B

TRANSPORTATION OF DANGEROUS GOODS INFORMATION:

Not Regulated

EMERGENCY TELEPHONE NUMBERS

Business: (905) 761-9920

24 Hours: (416) 574-5154

HAZARDOUS INGREDIENTS

<u>Ingredients</u>	<u>CAS#</u>	<u>% (weight)</u>	<u>LD/50 Route/Species</u>
Diglycidyl Ether of Bisphenol A	25068-38-6	30-60	30g/kg/Oral/rat
Alkyl (C12-C14) Glycidyl Ether	68609-97-2	5-10	>31.6ml/kg/Oral/Rat >4500mg/kg/skin/Rabbit
2-Methylphenyl Glycidyl Ether	2210-79-9	1-5	4000mg/kg(Rat-Oral) >2000mg/kg(Rabbit-Skin)
Synthetic Pyrogenic Silica	112945-52-5	1-5	LD50: >5000mg/kg (Oral)

PHYSICAL DATA

Physical State: Liquid
Specific Gravity: 1.15
Vapour Pressure: n/av
Solubility in Water: Insoluble
Boiling Point: n/av
Freezing/Melting Point: n/av
Viscosity: Gel
Vapour Density: n/av
Evaporation Rate: n/av

% Volatile: (voc): 10gm/l
Odour: negligible
Appearance: dark walnut colour

POTENTIAL HEALTH EFFECTS

Effect of Overexposure:

INHALATION: Do not heat the material. Vapours or mist generated from heating the material or as from exposure in poorly ventilated areas are irritating and cause nasal discharge. Coughing and discomfort in nose and throat.

EYES: Cause mild irritation

SKIN This product may cause skin irritation and/or sensitization after repeated contact.

INGESTION: Low toxicity causes irritation.

INGESTION: Low toxicity, causes irritation

Toxic effects or reproduction: No

Teratogenicity: No

Mutagenicity: No

Carcinogenicity: No

FIRST AID MEASURES

INHALATION: If inhaled, remove victim to fresh air. Get medical attention if breathing difficulties are experienced.

EYE CONTACT: Flush with water for at least 15 minutes while forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Consult a physician.

SKIN CONTACT: Wash with soap and water. Launder contaminated clothing before reuse. Contact a physician if irritation develops.

INGESTION: If swallowed DO NOT induce vomiting. Get prompt medical attention.

PREVENTIVE MEASURES

PERSONAL PROTECTION: The selection of personal protective equipment varies depending upon conditions of use. When handling product wear long sleeves, chemical resistant gloves and safety glasses with side shields. Use the product with an adequate ventilation or outdoor. Eye wash station (sink) or shower facility near the job is recommended in case of emergency.

ACCIDENTAL RELEASE MEASURES

PROCEDURE IN CASE OF LEAKS:

The material is not flowable. Prevent spills from entering sewers, watercourses or low areas. Absorb with sand or other absorbent material. Residue may be removed with hot water and detergent. All precautions should be taken when cleaning the spill with solvent.

ENVIRONMENTAL PRECAUTIONS: Avoid discharge to sewers or waterways.

SPILL CONTROL AND DISPOSAL: Dispose of sand and rinse water according to municipal, provincial or federal laws for disposal of chemicals.

HANDLING AND STORAGE

Avoid all skin contact. Avoid breathing vapours of heated materials. Keep away from sun, heat, sparks and open flame. Wash thoroughly after handling.

FIRE AND EXPLOSION DATA

Flashpoint and Method: >150^NC (T.C.C.)

Autoignition Temperature: Not Available

Flammable Limits: Not Available

GENERAL HAZARDS: Combustible liquid; may release vapours that combustible mixtures at or above the flash point. Toxic gases will form upon combustion.

FIRE FIGHTING: Use water spray to cool fire exposed surfaces and to protect personnel. Use foam or dry chemical to extinguish fire. Respiratory and eye protection required for fire fighting personnel. A self-contained breathing apparatus (SCUBA) should be used for all indoor fires and any significant outdoor fires. For small outdoor fires, which may easily be extinguished with a portable fire extinguisher, use of an SCUBA may not be required.

HAZARDOUS COMBUSTION PRODUCTS: Fumes, smoke, and carbon monoxide, carbon dioxide and various hydrocarbons.

REACTIVITY DATA

GENERAL: This product is stable and hazardous polymerization will not occur under normal conditions.

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID: Excessive heating. Avoid contact with strong acids and bases.

HAZARDOUS DECOMPOSITION: Carbon dioxide, carbon monoxide, various hydrocarbons.

PREPARATION

Prepared By: A. Zaghoul
Zeraus Products Inc.
250 Rayette Road, Unit 18
Vaughan, Ontario L4K 2G6
April 2011

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, expressed or implied, with respect to such information, and we assume no liability resulting from its use. User should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Zeraus Products Inc. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Zeraus Products Inc. has been advised of the possibility of such damages.



**Material Safety Data Sheet
ZeraBond Type 3 PART B**

PRODUCT INFORMATION

Manufacturer: Zeraus Products Inc.
250 Rayette Road, Unit 18
Vaughan, Ontario L4K 2G6

PRODUCT INFORMATION

Product Identifier: ZeraBond Type 1 Part B

Application and Use: Epoxy adhesive gel and crack filler for concrete repair.

Product Description: Two component clear epoxy adhesive gel (Amine Curatives)

HAZARD RATING SYSTEM (USA):

Health: 3

Flammability: 0

Reactivity: 0

WHMIS Classification (Canada):

Class D, Division 2, Subdivision B.,

Class E, corrosive

TRANSPORTATION OF DANGEROUS GOODS INFORMATION:

Amines, liquid, Corrosive, N.O.S. (2,4,6, Tridimethylaminomethyl Phenol)

Hazard Class: 8

ID Number: UN 2735

Packing Group: III

EMERGENCY TELEPHONE NUMBERS

Business: (905) 761-9920

24 Hours: (416) 574-5154

HAZARDOUS INGREDIENTS

<u>Ingredients</u>	<u>CAS#</u>	<u>%(pbwt.)</u>	<u>LD/50 Route/Species</u>
Polymer of Dimer Acids & Polyamines	6841023	25-70	LD50->16ml/kg(Rat-Oral) LD50-6.5ml/kg(Rabbit-Dermal)
Isophoronediamine	2855-13-2	5-15	LD50: >2000mg/kg (Rat-Ingestion) 2140mg/kg(Rabbit-Ski)
N-Amino Ethyl Piperazine	140-31-8	7-13	LD50- 2140mg/kg(Rat-Oral) 880mg/kg(Rabbit-Skin)
Nonyl Phenol	25154-52-3	5-15	LD50-1620mg/kg(Rat-Oral) 2140mg/kg(Rabbit-Skin)
Aromatic Hydrocarbon	64742-94-5	5-15	LD50-Not available
Synthetic Pyrogenic Silica	112945-52-5	2-10	LD50: >5000mg/kg (Oral) 2140mg/kg(Rabbit-Ski)
2,4,6 Trimethyl Aminomethyl Phenol	90-72-2	1-5	1200mg/kg(Rat-Oral)

PHYSICAL DATA

Physical State: Liquid
Specific Gravity: 1.0
Vapour Pressure: 0.70mm Hg @ 21°C (70°F)
Solubility in Water: Slight (0.1-1%)
Boiling Point: n/av
Freezing/Melting Point: n/av
Viscosity: Gel
Vapour Density: n/av
Evaporation Rate: n/av
% Volatile: (voc): 10gm./l
Odour: Characteristic amine
Appearance: amber gel

POTENTIAL HEALTH EFFECTS

Effect of Overexposure:

INHALATION: Irritating to respiratory tract. Coughing and chest pain may result if inhaled directly.

EYE CONTACT: Contact of undiluted product with the eyes quickly causes irritation and pain and may cause burns, necrosis and permanent injury.

SKIN CONTACT: can cause skin burns. Can cause allergic skin reaction and sensitization.

INGESTION: Swallowing may cause severe burns to the mouth, throat and stomach. May cause vomiting, nausea and dizziness. Loss of consciousness may occur. Drowsiness may occur. Weakness and incoordination may occur.

Toxic effects or reproduction:	No
Teratogenicity:	No
Mutagenicity:	No
Carcinogenicity:	No

Acute or Chronic Exposure: Repeated and/or prolonged exposure may cause allergic reaction/sensitization. Repeated and/or prolonged exposures may result in adverse eye effects, adverse skin effect. Dryness of nasal passages may be experienced when material is inhaled over a long period of time.

FIRST AID MEASURES

Emergency procedures:

In the event of an emergency, remove the victim from further exposure, send for medical assistance, and initiate the following emergency procedures:

INHALATION: If inhaled, remove victim to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. Keep person warm, quiet, and get medical attention.

EYE CONTACT: Flush with water for at least 15 minutes while forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Get medical attention. If medical care is not promptly available, continue to irrigate for one hour.

SKIN CONTACT: Immediately remove contaminated clothing. Wash with soap and water and maintain gentle and continuous irrigation for 15 minutes. Launder contaminated clothing before reuse. Contact a physician if irritation develops.

INGESTION: Give two glasses of water. Get medical attention immediately. Do not induce vomiting. Never give

anything by mouth to an unconscious person.

NOTE TO PHYSICIAN: There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and as the clinical condition of the patient.

PREVENTIVE MEASURES

PERSONAL PROTECTION: The selection of personal protective equipment varies depending upon conditions of use. When handling product wear long sleeves, chemical resistant gloves and safety glasses with side shields. Use the product with an adequate ventilation or outdoor. Eye wash station (sink) or shower facility near the job is recommended in case of emergency.

ACCIDENTAL RELEASE MEASURES

PROCEDURE IN CASE OF LEAKS:

Extinguish and eliminate source of ignition until area is determined to be free from explosion or fire hazards. Prevent spills from entering sewers, watercourses or low areas. Absorb with sand or other absorbent material (do not use sawdust). Residue may be removed with hot water and detergent. Flush small spills with water.

ENVIRONMENTAL PRECAUTIONS: The product is toxic to aquatic life in liquid form. Avoid discharge to sewers or waterways.

SPILL CONTROL AND DISPOSAL: Dispose of sand and rinse water according to municipal, provincial or federal laws for disposal of chemicals.

HANDLING AND STORAGE

HANDLING, STORAGE AND SHIPPING: Avoid all skin contact. Avoid breathing vapours of heated materials. Keep away from sun, heat, sparks and open flame. Wash thoroughly after handling.

FIRE AND EXPLOSION DATA

Flashpoint and Method: $>100^{\text{N}}\text{C}$ (T.C.C.)

Autoignition Temperature: Not available

Flammable Limits: Not available

GENERAL HAZARDS: Combustible liquid; may release vapours that form combustible mixtures at or above the flash point. Toxic gases will form upon combustion.

FIRE FIGHTING: Personnel in vicinity and downwind should be evacuated. Fire fighters should wear approved self contained breathing apparatus and full protective clothing.

HAZARDOUS COMBUSTION PRODUCTS: May generate toxic or irritating combustion products. Ammonia, oxides of carbon (CO, CO₂) and oxides of Nitrogen.

REACTIVITY DATA

GENERAL: This product is stable and hazardous polymerization will not occur under normal conditions.

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID: Excessive heating. Avoid contact with acids.

HAZARDOUS DECOMPOSITION: None under normal storage conditions.

PREPARATION

Prepared By: A. Zaghoul
Zeraus Products Inc.
250 Rayette Road, Unit 18
Vaughan, Ontario L4K 2G6
April 2011

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, expressed or implied, with respect to such information, and we assume no liability resulting from its use. User should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Zeraus Products Inc. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Zeraus Products Inc. has been advised of the possibility of such damages.