

Material Safety Data Sheet (MSDS)

Health: 2, Fire: 2, Reactivity: 1, Personal Protection: H
Hazard Rating: Least - 0, Slight - 1, Moderate - 2, High - 3, Extreme - 4.

Section 1 Product Identification

Product Name: ROADWARE FLEXIBLE CEMENT II (Component A)

Chemical Family: Aromatic Isocyanate.

Product Use: For repairing and restoring concrete when combined with Roadware Flexible Cement II (Component B).

Manufacturer:

Roadware Incorporated
381 Bridgepoint Drive
South St. Paul, MN 55075
651-457-6122

24 HOUR EMERGENCY TELEPHONE NUMBER: CALL CHEM-TEL 800-255-3924. USE ONLY IN THE EVENT OF CHEMICAL EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT INVOLVING ROADWARE PRODUCTS.

WHMIS Classification: D2B; TDG Shipping Information: Non-regulated Material US DOT CA-9501002; Non-regulated by Road or Rail as per permit No. SU 4652

Date Prepared:

June 1, 2008

Section 2 Hazardous Ingredients/SARA III Information

Haz. Cmpts	CAS #	OSHA PEL	EXPOS. LIMIT	%W*
4,4' -Diphenylmethane-Diisocyanate	101-68-8	0.02ppm	0.005ppm	MAJOR
Di (2-ethylhexyl) phthalate	117-81-7	N/E	5 gm/m3	MAJOR

*MAJOR = OVER 25%, MINOR = 6-25%, TRACE = UNDER 6%, RESIDUE = UNKNOWN % RESIDUE POSSIBLE

Section 3 Physical/Chemical Characteristics

Boiling Pt: >392° F (200° C)

Melting Pt: N/A

Vapor Density: N/A

Vapor Pressure: 0.00016 mm Hg @ 77° F

V.O.C.: 5.5g/L

Solubility In Water: reacts with water.

Specific Gravity: 1.07

Evaporation Rate: N/A

Appearance And Odor: Blue/Black liquid, no distinct odor.

Section 4 Fire And Explosion Hazard Data

Flash Point:

392° F (200° C) Method Used: Pensky Martins

Flammable Limits In Air By Volume - Lower: N/A **Upper:** N/A

Extinguishing Media: Foam, C02, Dry Chemical, water fog.

Special Fire Fighting Procedures: Wear self-contained breathing apparatus in confined areas or when exposed to combustible products.

Unusual Fire And Explosion Hazard: Water contamination of product will generate C02 gas. In confined or closed containers, this will cause pressurization or explosion.



Section 5 Reactivity Data

Stability: stable

Conditions To Avoid: Humidity, alcohol, strong bases. Reaction with water produces gases which may burst containers.

Incompatibility (materials to avoid): Water, alcohol, strong bases, extreme heat

Hazardous Decomposition Or By Products: Carbon dioxide, carbon monoxide, nitrogen oxide.

Hazardous Polymerization: Will not occur.

Section 6 Health Hazard Data

Inhalation Health Risks And Symptoms Of Exposure: Inhalation of mists and vapors can cause dry throat and cough, dizziness, headache, nausea, and fatigue, MDI can induce respiratory sensation with asthma-like symptoms.

Skin And Eye Contact Health Risks And Symptoms Of Exposure: Repeated and prolonged contact can cause skin irritation.

Skin Absorption Health Risks And Symptoms Of Exposure: Repeated skin contact can cause reddening, swelling and blistering.

Ingestion Health Risks And Symptoms Of Exposure:

Low level of acute oral toxicity, can cause nausea, vomiting, diarrhea, headache and irritation and/or burns to the mouth.

Carcinogenicity: NTP? NO, IARC Monographs? NO, OSHA Regulated? NO

Medical Conditions Generally Aggravated By Exposure: Eye and Skin irritation, asthma like conditions.

Emergency And First Air Procedures: **Eye contact** - Flush eye with water for at least 15 minutes. Get medical attention promptly. **Inhalation** - Remove person to fresh air, if breathing is difficult administer oxygen. Get medical attention immediately. **Skin contact** - Wipe off and wash contacted area thoroughly with soap and water. **Ingestion** - Drink water or milk. Do not induce vomiting. Consult physician immediately.

Section 7 Precautions For Safe Handling and Use

Steps To Be Taken In Case Material Is Released Or Spilled: Cover liquid with absorbent material (saw dust, etc.) Place in open container and remove to well ventilated area. Decontaminate absorbent and spill area with a solution of 90% water, 8% ammonia, 2% detergent.

Waste Disposal Method: Dispose of isocyanate alone in accordance with local, state, or federal regulations. For unused material or expired material, completely mix the two components of the cartridge, bag or cans together and dispose with non-hazardous waste after product has cured.

Precautions To Be Taken In Handling And Storing: Store in cool dry place, away from heat, open flame, sparks and moisture.

Other Precautions: Individuals with respiratory problems to Isocyanates must not be exposed to vapors or spray mist containing Isocyanates.

Section 8 Control Measures

Respiratory Protection: Provide adequate ventilation to keep the airborne concentration of diisocyanate below TLV limit. For concentration above TLV limit use of a positive pressure self-contained breathing apparatus (SCBA) or NIOSH/MSHA approved positive pressure supplied air respirator with a full face piece and escape (SCBA) required.

Ventilation: Local exhaust recommended.

Eye Protection: chemical safety goggles.

Other Protective Clothing Or Equipment: Laboratory coats or aprons and polyvinyl or rubber gloves to avoid skin contact. Accessible to safety shower and eye wash stations.

Work/ Hygiene Practices: Avoid unnecessary exposure to vapors and mists. Use protective equipment to minimize skin contact. Do not open containers until ready to use. Wash thoroughly after using.

Section 9 Disclaimer

The data set forth in this sheet is based on information provided by the suppliers of raw materials and chemicals used in the manufacture of the aforementioned product. Roadware Incorporated makes no warranty with respect to the accuracy of the information provided by their suppliers, and disclaims all liability of reliance thereof.

Material Safety Data Sheet (MSDS)

Health: 1, Fire: 2, Reactivity: 0, Personal Protection: H
Hazard Rating: Least - 0, Slight - 1, Moderate - 2, High - 3, Extreme - 4.

Section 1 Product Identification

Product Name: ROADWARE Flexible Cement II (Component B)

Chemical Family: Polyol

Product Use: For repairing and restoring concrete when combined with Roadware Flexible Cement II (Component A).

Manufacturer:

Roadware Incorporated

381 Bridgepoint Drive

South St. Paul, MN 55075

651-457-6122

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WHM13 Classification: Non Regulated **TDG Shipping Info:** Non Regulated

Date Prepared: June 1, 2008

Section 2 Hazardous Ingredients/SARA III Information

Haz. Cmpts	CAS #	OSHA PEL	EXPOS. LIMIT	%W*
Nonyl Phenol	25154-52-3	N/E	N/E	1-5
Phenylmercuric acetate	62-38-4	N/E	N/E	0.5 - 1.5
Diphenylmethane Diisocyanate	101-68-8	N/E	0.005 ppm	5-10
Polyether Polyols	9082-00-2	N/E	N/E	83-94

Section 3 Physical/Chemical Characteristics

Boiling Pt: 392° F (200° C)

Melting Pt: N/A

Vapor Density:

N/A

Vapor Pressure: N/A

V.O.C.: 5.5g/L

Solubility In Water: Insoluble.

Specific Gravity: 1.0523 g/ml @ 77°F

Evaporation Rate: N/A

Appearance And Odor: White liquid, mild odor.

Section 4 Fire And Explosion Hazard Data

Flash Point:

217° C (422° F) Method Used: Open Cup.

Flammable Limits In Air By Volume - Lower: N/A Upper: N/A

Extinguishing Media: Foam, CO2, Dry Chemical.

Special Fire Fighting Procedures: Wear self contained breathing apparatus in positive pressure mode with face piece. Boots, gloves (neoprene), goggles, and protective clothing are also required.

Unusual Fire And Explosion Hazard: None



Section 5 Reactivity Data

Stability: stable

Conditions To Avoid: None

Incompatibility (materials to avoid): Water, alcohol, strong bases, extreme heat

Hazardous Decomposition Or By Products: Carbon dioxide, carbon monoxide, oxides of nitrogen

Hazardous Polymerization: Will not occur.

Section 6 Health Hazard Data

Inhalation Health Risks And Symptoms Of Exposure: No adverse effects likely.

Skin And Eye Contact Health Risks And Symptoms Of Exposure: May cause mild skin and eye irritation.

Skin Absorption Health Risks And Symptoms Of Exposure: Repeated skin contact can cause reddening, swelling and blistering.

Ingestion Health Risks And Symptoms Of Exposure:

Ingestion may cause gastrointestinal discomfort.

Carcinogenicity: NTP? NO, IARC Monographs? NO, OSHA Regulated? NO

Medical Conditions Generally Aggravated By Exposure: None

Emergency And First Aid Procedures: **Eye contact** - Flush eye with water for at least 15 minutes. Get medical attention promptly. **Inhalation** - Remove person to fresh air, if breathing is difficult administer oxygen. Get medical attention immediately. **Skin contact** - Wipe off and wash thoroughly contacted area with soap and water. **Ingestion** - Induce vomiting. Consult physician immediately.

Section 7 Precautions For Safe Handling and Use

Steps To Be Taken In Case Material Is Released Or Spilled: Cover liquid with absorbent material (sawdust, etc.)

Waste Disposal Method: Dispose of in accordance with local and federal regulations. For unused material or expired material, completely mix the two components of the cartridge, bag or cans together and dispose with non-hazardous waste after product has cured.

Precautions To Be Taken In Handling And Storing: Store in cool dry place, away from heat, open flame, sparks and moisture.

Other Precautions: None

Section 8 Control Measures

Respiratory Protection: None required.

Ventilation: Local exhaust recommended.

Eye Protection: Chemical safety goggles.

Other Protective Clothing Or Equipment: Laboratory coats or aprons and polyvinyl or rubber gloves to avoid skin contact. Accessible to safety shower and eye wash stations.

Work/Hygiene Practices: Avoid unnecessary exposure to vapors and mists. Use protective equipment to minimize skin contact. Do not open containers until ready to use. Wash thoroughly after using.

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