



Material Safety Data Sheet

Monopole, Inc.

Product Name: MONO-CAULK PART A

Issue Date: July 2008

Monopole Inc. encourages and expects you to read and understand the entire MSDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

SECTION 1: Product and Company Identification

Product Name: MONO-CAULK PART A

Product Code: 2990

COMPANY IDENTIFICATION

Monopole, Inc.
4661 Alger Street
Los Angeles, CA 90039
Tel: (818) 500-8585
Fax: (818) 502-0818

EMERGENCY TELEPHONE NUMBERS:

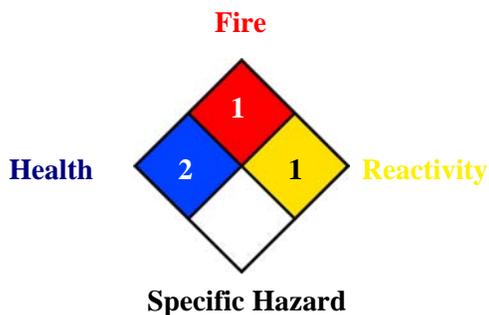
Health emergency : (818) 500 - 8585
Poison center..... : (818) 356 - 3129
Chemtrec..... : (800) 424 - 9300

SECTION 2: Hazard Identification

EMERGENCY OVERVIEW

Color: White
Physical State: Liquid
Odor: Mild

NFPA HAZARD RATING SYSTEM



POTENTIAL HEALTH EFFECTS

Inhalation: Inhalation of vapor or mist can cause headache, nausea, and may irritate the throat or lungs.

Skin Contact: Prolonged or repeated skin contact can cause discomfort or rash.

Eye Contact: Direct eye contact can cause severe irritation with discomfort, tearing, reddening or blurring of vision.

SECTION 3: Hazardous Ingredients

Hazardous Components	CAS#	OSHA (PEL)	ACGIH (TLV)	VAPOR PRESSURE
*3-ISOCYANATOMETHYL-3,5,5	4098-71-9	.005 ppm	.005 ppm	mm: .0003 Hg @ TEMP: 20°C (68°F)

TRIMETHYL CYCLOHEXYL ISOCYANATE		(SKIN)	(SKIN)	
URETHANE PREPOLYMER		N/E	N/E	

**Indicates toxic chemical(s) subject to the reporting requirements of Section 313 of Title III and of 40 CFR 372. Information concerning non-hazardous ingredients is considered a Trade Secret.*

SECTION 4: Physical / Chemical Properties

BOILING POINT: > 140°C (284°F)

FREEZING POINT: 32°F (0.0°C)

V.O.C. (Combined Part A & Part B): <70 g/L

VAPOR DENSITY: N/A

SOLUBILITY IN WATER: Not Established

EVAPORATION RATE: Slower than ether.

COLOR AND ODOR: White viscous liquid, mild chemical odor

SPECIFIC GRAVITY 1.056

SECTION 5: Fire and Explosion Hazard Data

FLASH POINT: >93°C (>200°F)

METHOD USED: TCC

FLAMMABLE LIMITS IN AIR BY VOLUME: Lower: N/E

Upper: N/E

EXTINGUISHING MEDIA: Dry chemical, foam, carbon dioxide. If water is used, use very large quantities of cold water. The reaction between water and hot isocyanate may be vigorous.

SPECIAL FIRE FIGHTING PROCEDURES: Wear NIOSH approved self-contained breathing apparatus in positive pressure mode with full-face piece. Boots, gloves (neoprene), goggles, and full protective clothing are also required. Excessive pressure or temperature may cause explosive rupture of containers.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Water contamination will produce carbon dioxide. Do not reseal contaminated containers as pressure buildup may rupture them.

SECTION 6: Reactivity Data

STABILITY: Stable under normal conditions.

CONDITIONS TO AVOID: Heat, high temperature, open flame, sparks, and moisture. Contact with incompatible materials in a closed system will cause liberation of carbon dioxide and buildup of pressure.

INCOMPATIBILITY (MATERIALS TO AVOID): This product will react with any material containing active hydrogens, such as water, alcohol, ammonia, amines, alkalis and acids, the reaction with water is slow under 50°C, but is accelerated at higher temperature and in the presence of alkalis, tertiary amines, and metal compounds. Some reactions can be violent.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Carbon dioxide, carbon monoxide, nitrogen oxides, trace amounts of hydrogen cyanide and unidentified organic compounds may be formed during combustion.

HAZARDOUS POLYMERIZATION: Will not occur. High temperatures in the presence of alkalis, tertiary amines, and metal compounds will accelerate polymerization. Possible evolution of carbon dioxide gas may rupture closed containers.

SECTION 7: Health Hazard Data

SKIN CONTACT: Isocyanates react with skin protein and moisture and can cause irritation. Prolonged contact can cause reddening, swelling, rash, scaling, blistering, and, in some cases, skin sensitization. Individuals who have developed a skin sensitization can develop these symptoms as a result of contact with very small amounts of liquid material or as a result of exposure to vapor. Animal tests have indicated that respiratory sensitization can result from skin contact with IPDI.

EYE CONTACT: Liquid, aerosols or vapors are severely irritating and can cause pain, tearing, reddening and swelling. Prolonged vapor contact may cause conjunctivitis. Any level of contact should not be left untreated.

SKIN ABSORPTION: Concentrations of this product will probably not be absorbed through human skin.

INGESTION: Can result in irritating and corrosive action in the mouth, stomach tissue and digestive tract. Symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea. Small amounts of this product aspirated into the respiratory system during ingestion or vomiting may cause mild to severe pulmonary injury.

INHALATION: Isocyanate vapors or mist at concentrations above the TLV can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing obstruction). High vapor concentrations may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness, and other central nervous system (CNS) effects. Persons with a preexisting, nonspecific bronchial hyperactivity can respond to concentrations below the TLV with similar symptoms as well as asthma attack. Exposure well above the TLV may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). As a result of previous repeated overexposures or a single large dose, certain individuals may develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the TLV. Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Chronic overexposure to isocyanate has also been reported to cause lung damage (including decrease in lung function) which may be permanent. Sensitization can either be temporary or permanent.

HEALTH HAZARDS: ACUTE: Exposure may cause mucous membrane and respiratory tract irritation, tightness of chest, headache, shortness of breath, and a dry cough. At concentrations exceeding current occupational limits and for sensitized individuals at levels less than or greater than current occupational limits, asthma-like symptoms may occur. These symptoms may include coughing, wheezing, and shortness of breath. A hypersensitive pneumonitis may also occur if the person is sensitized. This syndrome is characterized by fever, nonproductive cough, wheezing, chills, and shortness of breath. Dizziness, anesthesia, drowsiness, unconsciousness and other central nervous system effects may also result. The effects of acute exposure may be delayed in onset up to 12-24 hours. **CHRONIC:** Repeated exposure above current occupational limits may cause an allergic sensitization of the respiratory tract. This is characterized by an asthma-like response upon re-exposure to the chemical. The symptoms may include coughing, wheezing, shortness of breath and chest tightness. Central nervous system (CNS) impairment possibly leading to unconsciousness.

CARCINOGENICITY: NTP: No

IARC Monographs: No

OSHA Regulated: No

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Cardiovascular disease, asthma or asthmatic bronchitis, emphysema, allergic disease, chronic respiratory disease, sinusitis, headache and dizziness.

SECTION 8: Emergency and First Aid Procedures

EYE CONTACT: Immediately flush eyes with plenty of water, preferably lukewarm. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and treated by medical personnel.

INHALATION: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is labored, give oxygen. Consult medical personnel.

SKIN CONTACT: Wash material off the skin thoroughly with plenty of soap and water. If redness, itching, or a burning sensation develops, get medical attention. Wash contaminated clothing and decontaminate footwear before reuse.

INGESTION: Do not induce vomiting. Give 1 or 2 glasses of milk or water to drink and refer person to medical personnel. Do not give anything by mouth to an unconscious person.

SECTION 9: Precautions for Safe Handling and Use

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wear skin, eye, and respiratory protection during cleanup. Soak up material with absorbent and shovel into a chemical waste container. Cover container, but do not seal, and remove from work area. Prepare a decontamination solution of 2.0% liquid detergent and 3-8% concentrated ammonium hydroxide in water (5-10% sodium carbonate may be substituted for the ammonium hydroxide). Follow the precautions on the supplier's material safety data sheets. All operations should be performed by trained personnel familiar with the hazards of the chemicals used. Treat the spill area with the decontamination solution, using about 10 parts of solution for each part of the spill, and allow it to react for at least 15 minutes. Carbon dioxide will be evolved, leaving insoluble polyureas. Residues from spill cleanup, even when treated as described may continue to be regulated under provisions of RCRA and require storage and disposal as hazardous waste. For major spills, call CHEMTREC (Chemical Transportation Emergency Center) at 800-424-9300.

WASTE DISPOSAL METHOD: Slowly stir the isocyanate waste into the decontamination solution described above. Let stand for 48 hours, allowing the evolved carbon dioxide to vent away, residues may still be subject to RCRA storage and disposal requirements. Dispose off in compliance with all relevant local, state, and federal laws and regulations regarding treatment.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep in cool, dry, ventilated storage area, in closed containers and out of direct sunlight. Store liquid in containers above ground and surrounded by dikes to contain spills or leaks. Keep containers closed when not in use. Do not cut, drill, grind, weld or perform similar operations on or near containers. Do not pressurize containers to empty them.

OTHER PRECAUTIONS: Prevent skin and eye contact, observe TLV limitations. Avoid breathing vapors. Workers should shower and change to fresh clothing after each shift. A sensitized individual should not be exposed to the product that caused the sensitization. Air circulation and exhaustion of isocyanate vapors must be maintained until the coatings have fully cured to insure that no potential fire, explosion or health hazard remains. Warning properties (irritation of the eyes, nose and throat or odor) are not adequate to prevent chronic overexposure from inhalation. This product can produce asthmatic sensitization upon either single inhalation exposure to a relatively high concentration or upon repeated inhalation exposure to lower concentrations. Exposure to vapors of heated isocyanates can be extremely dangerous. Employee education and training in safe handling of this material is required under OSHA hazard communication standard. Individuals with existing respiratory disease such as chronic bronchitis, emphysema, or asthma should not be exposed to isocyanates. These individuals should be identified through baseline and annual evaluation and removed from further exposure. Medical examination should include medical history, vital capacity, and forced expiratory volume at one second.

SECTION 10: Control Measures

VENTILATION: Use local exhaust ventilation to keep airborne concentrations below the TLV. Follow guidelines in the ACGIH publication "Industrial Ventilation".

RESPIRATORY PROTECTION: If airborne concentrations exceed or are expected to exceed the TLV, use MSHA/NIOSH approved positive pressure supplied air respirator with a full-face piece or an air supplied hood. For emergencies, use a positive pressure self-contained breathing apparatus. Air purifying (cartridge type) respirators are not approved for protection against isocyanates.

PROTECTIVE CLOTHING: Gloves determined to be impervious under the conditions of use should be worn always when working with this product. Depending on conditions of use, additional protection may be required such as apron, arm covers, or full body suit. Wash contaminated clothing before re-wearing. Protective clothing should be selected and used in accordance with "Guidelines for the Selection of Chemical Protective Clothing" published by ACGIH.

EYE PROTECTION: Chemical tight goggles and full-face shield.

OTHER PROTECTIVE EQUIPMENT AND MEASURES: Unhindered access to safety shower and eye wash stations. As a general hygienic practice, wash hands and face after use. Showers and cleaning of clothes are recommended. Follow all label instructions. Educate and train employees in safe use of product.

SECTION 11: Regulatory Information

DOT PROPER SHIPPING NAME: Not regulated. **IATA PROPER SHIPPING NAME:** Not Regulated.

IMO PROPER SHIPPING NAME: Not regulated.

STATE REGULATIONS: CALIFORNIA: As per requirements of the Safe Drinking Water & Toxic Enforcement Act of CA, USA 1985 (proposition 65), the public is warned that materials used in this product may create an exposure to chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm. This warning required by Section 25249.6 of the California Health and Safety Code.

TOXIC SUBSTANCE CONTROL ACT: Listed on the TSCA inventory.

USER'S RESPONSIBILITY: A bulletin such as this cannot be expected to cover all possible individual situations. As the user has the responsibility to provide a safe workplace, all aspects of an individual operation should be examined to determine if, or where, precautions, in addition to those described herein, are required. Any health hazard and safety information herein should be passed on to your customers or employees, as the case may be.

DISCLAIMER: To the best of our knowledge, the information contained herein is accurate, but no representation, guarantee or warranty, expressed or implied, is made as to the accuracy, reliability or completeness of the information. All chemicals 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 which exist. Monopole Inc. urges persons receiving this information to make their own determination as to the information's suitability and completeness for their particular application. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.



Material Safety Data Sheet

Monopole, Inc.

Product Name: MONO-CAULK PART B

Issue Date: July 2008

Monopole Inc. encourages and expects you to read and understand the entire MSDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

SECTION 1: Product and Company Identification

Product Name: MONO-CAULK PART B

Product Code: 2990

COMPANY IDENTIFICATION

Monopole, Inc.
4661 Alger Street
Los Angeles, CA 90039
Tel: (818) 500-8585
Fax: (818) 502-0818

EMERGENCY TELEPHONE NUMBERS:

Health emergency : (818) 500 - 8585
Poison center..... : (818) 356 - 3129
Chemtrec..... : (800) 424 - 9300

SECTION 2: Hazard Identification

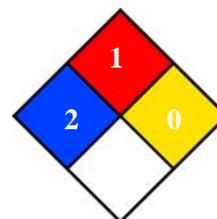
NFPA HAZARD RATING SYSTEM

EMERGENCY OVERVIEW

Color: Amber
Physical State: Liquid
Odor: Mild

Fire

Health



Reactivity

Specific Hazard

POTENTIAL HEALTH EFFECTS

INHALATION: Vapors can irritate eyes, nose and respiratory passages.

SKIN CONTACT: Skin sensitization and irritation may develop after repeated and/or prolonged contact.

EYE CONTACT: Can induce irritation or chemical burns.

SECTION 3: Hazardous Ingredients

Hazardous Components	CAS#	OSHA (PEL)	ACGIH (TLV)	VAPOR PRESSURE
AROMATIC AMINE	68479-98-1	N/E	N/E	mm: .0001 Hg @ TEMP: 20°C (68°F)

**Indicates toxic chemical(s) subject to the reporting requirements of Section 313 of Title III and of 40 CFR 372. Information concerning non-hazardous ingredients is considered a Trade Secret.*

SECTION 4: Physical / Chemical Properties

BOILING POINT: 306°C (583°F)

VAPOR DENSITY: Heavier than air

V.O.C. (Combined Part A & Part B): < 70 g/L

EVAPORATION RATE: Slower than ether.

SOLUBILITY IN WATER: Insoluble

COLOR AND ODOR: Amber, mild odor

SPECIFIC GRAVITY: 1.018

SECTION 5: Fire and Explosion Hazard Data

FLASH POINT: >93°C (>200°F)

METHOD USED: TCC

FLAMMABLE LIMITS IN AIR BY VOLUME: Lower: N/E

Upper: N/E

EXTINGUISHING MEDIA: Dry chemical, foam, carbon dioxide, water spray (fog).

SPECIAL FIRE FIGHTING PROCEDURES: Wear NIOSH approved self-contained breathing apparatus in positive pressure mode with full-face piece. Boots, gloves (neoprene), goggles, and full protective clothing are also required. Excessive pressure or temperature may cause explosive rupture of containers.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Sudden reaction and fire may result when the product is exposed to oxidizing agents.

SECTION 6: Reactivity Data

STABILITY: Stable under normal conditions.

CONDITIONS TO AVOID: Heat, high temperature and moisture.

INCOMPATIBILITY (MATERIALS TO AVOID): Isocyanates and strong oxidizers.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Combustion products: organic vapors and thermal decomposition fragments.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 7: Health Hazard Data

SKIN ABSORPTION: Product may be absorbed through skin and cause nausea, headache, and general discomfort.

INGESTION: In humans, irritation or chemical burns of the mouth, pharynx, esophagus and stomach can develop following ingestion, and injury may be severe and cause death.

SKIN CONTACT: Skin sensitization and irritation may develop after repeated and/or prolonged contact with human skin.

EYE CONTACT: Can induce irritation or chemical burns on contact with eyes.

INHALATION: Vapors can irritate eyes, nose and respiratory passages. Severe overexposure may induce respiratory sensitization with asthma like symptoms. Symptoms include chronic cough, tightness of chest with difficulty in breathing. These symptoms may be immediate or delayed up to several hours after exposure. Chronic exposures may result in permanent decreases in lung function.

HEALTH HAZARDS: ACUTE: Exposure may cause skin and eye irritation, respiratory tract irritation. Chemical burns may result due to overexposure. Affects of exposure may be delayed. **CHRONIC:** Repeated and prolonged exposure at low levels may result in adverse skin and eye effects, liver and kidney disorders.

CARCINOGENICITY: NTP: No IARC Monographs: YES OSHA Regulated: No

IARC classifies carbon black as a category 2B carcinogen (known animal carcinogen, possible human carcinogen) based on inhalation studies. Because this product is a free-flowing liquid or paste, dust inhalation is not an expected route of exposure. Sanding cured product can result in exposure to carbon black dusting

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Cardiovascular disease, asthma or asthmatic bronchitis, skin allergies, chronic respiratory disease, sinusitis, headache, dizziness, eye diseases.

SECTION 8: Emergency and First Aid Procedures

EYE CONTACT: Immediately flush eyes with plenty of water, preferably lukewarm. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and treated by medical personnel.

INHALATION: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is labored, give oxygen. Consult medical personnel.

SKIN CONTACT: Wash material off the skin thoroughly with plenty of soap and water. If redness, itching, or a burning sensation develops, get medical attention. Wash contaminated clothing and decontaminate footwear before reuse.

INGESTION: Do not induce vomiting. Give 1 or 2 glasses of milk or water to drink and refer person to medical personnel. Do not give anything by mouth to an unconscious person.

SECTION 9: Precautions for Safe Handling and Use

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wear skin, eye, and respiratory protection during cleanup. Soak up material with absorbent and shovel into a chemical waste container. Cover container, but do not seal, and remove from work area. Residues from spill cleanup may continue to be regulated under provisions of RCRA and require storage and disposal as hazardous waste. For major spills, call CHEMTREC (Chemical Transportation Emergency Center) at 800-424-9300.

WASTE DISPOSAL METHOD: Spill cleanup residues may still be subject to RCRA storage and disposal requirements. Dispose off in compliance with all relevant local, state, and federal laws and regulations regarding treatment.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Store in tightly sealed containers to protect from atmospheric moisture. Store in a cool dry area.

OTHER PRECAUTIONS: Prevent skin and eye contact, observe TLV limitations. Avoid breathing vapors. Workers should shower and change to fresh clothing after each shift. A sensitized individual should not be exposed to the product that caused the sensitization.

SECTION 10: Control Measures

VENTILATION: Use local exhaust ventilation to keep airborne concentrations below the TLV. Follow guidelines in the ACGIH publication "Industrial Ventilation".

RESPIRATORY PROTECTION: If airborne concentrations exceed or are expected to exceed the TLV, use MSHA/NIOSH approved organic vapor cartridge respirators. For emergencies, use a positive pressure self-contained breathing apparatus.

PROTECTIVE CLOTHING: Gloves determined to be impervious under the conditions of use should be worn always when working with this product. Depending on conditions of use, additional protection may be required such as apron, arm covers, or full body suit. Wash contaminated clothing before re-wearing. Protective clothing should be selected and used in accordance with "Guidelines for the Selection of Chemical Protective Clothing" published by ACGIH.

EYE PROTECTION: Chemical tight goggles and full-face shield.

OTHER PROTECTIVE EQUIPMENT AND MEASURES: Unhindered access to safety shower and eye wash stations. As a general hygienic practice, wash hands and face after use. Showers and cleaning of clothes are recommended.

SECTION 11: Regulatory Information

DOT PROPER SHIPPING NAME: Not regulated.

IATA PROPER SHIPPING NAME: Not Regulated.

IMO PROPER SHIPPING NAME: Not regulated.

TOXIC SUBSTANCE CONTROL ACT: Listed on the TSCA inventory.

USER'S RESPONSIBILITY: A bulletin such as this cannot be expected to cover all possible individual situations. As the user has the responsibility to provide a safe workplace, all aspects of an individual operation should be examined to determine if, or where, precautions, in addition to those described herein, are required. Any health hazard and safety information herein should be passed on to your customers or employees, as the case may be.

DISCLAIMER: To the best of our knowledge, the information contained herein is accurate, but no representation, guarantee or warranty, expressed or implied, is made as to the accuracy, reliability or completeness of the information. All chemicals 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 which exist. Monopole Inc. urges persons receiving this information to make their own determination as to the information's suitability and completeness for their particular application. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.