

Material Safety Data Sheet

Stevens OlyBond Classic - Part A SKU# 2087113 - 2087118

DATE OF PREPARATION 03/28/05. ESSENTIALLY SIMILAR TO FORM OSHA-20.

SECTION I -- PRODUCT IDENTIFICATION

MANUFACTURER:

Stevens Roofing Systems, Inc.

Nine Sullivan Road

Holyoke, MA 01040

Product Information: 1-413-552-1000

Emergency Information: CHEMTREC 1-800-424-9300

or 1-703-527-3887

PRODUCT NAME: Stevens OlyBond Classic (Part A)

SECTION II -- HAZARDOUS INGREDIENTS

Ingredients	CAS #	Weight %	---Exposure Limits---		
			ACGIH/TLV TWA	STEL	OSHA/PEL
Polymethylene polyphenyl isocyanate containing: 4,4' Diphenylmethane Diisocyanate	9016-87-9	100	NE	NE	NE
	101-68-8ca 50		0.005 ppm	NE	0.02 ppm (C)

NA = Not Applicable ND = Not Determined NE = Not Established

SECTION III -- PHYSICAL DATA

Physical Form:	Dark brown viscous liquid	Vapor Pressure (mm at 20 ⁰ C):	<0.00001
Odor:	Pungent	Solubility in water:	Not soluble, reacts
pH:	Reacts with water	Specific Gravity at 25 ⁰ C:	1.23
Boiling Point:	406 ⁰ F, 207 ⁰ C (5 mmHg)		

SECTION IV -- FIRE & EXPLOSION HAZARD

Flash Point: 319 ⁰ F, 198 ⁰ C (COC) NFPA Combustible Class III B	If possible, contain fire run-off water.
Autoignition Temperature: NDA	Protective Equipment: Wear positive-pressure self-contained breathing apparatus with full face mask and full protective clothing.
Flammable Limits (STP): NDA Toxic fumes are released in fire situations.	
Fire Degradation Products: Isocyanate vapor and mist, carbon dioxide, carbon monoxide, nitrogen oxides and traces of hydrogen cyanide.	Unusual Hazards: At temperatures greater than 400 ⁰ F, polymeric MDI can polymerize and decompose which will cause pressure build-up in closed containers. Explosive rupture is possible. Water contamination will produce carbon dioxide. Do not reseal contaminated containers as pressure buildup may rupture the containers. Downwind personnel must be evacuated.
Extinguishing Media: Use dry chemical, foam, carbon dioxide, or halogenated agents. If water is used, use very large quantities. The reaction between water and hot isocyanate may be vigorous.	

SECTION V -- HEALTH HAZARD

Emergency Overview: Harmful if inhaled. Toxic fumes are released in fire situations. Dark brown viscous liquid. Pungent odor.

HMIS Rating: Health 3 Flammability 1 Reactivity 1
Insignificant = 0 Slight = 1 Moderate = 2 High = 3 Extreme = 4

Potential Health Effects:

- **Inhalation:** At room temperature, MDI vapors are minimal due to low vapor pressure. However, heating, spraying, foaming, or otherwise mechanically dispersing (drumming, venting or pumping) operations may generate vapor or aerosol concentrations sufficient to cause irritation or other adverse effects. Excessive exposure may cause irritation of the eyes, upper respiratory tract and lungs. Severe overexposure may lead to pulmonary edema. May cause respiratory sensitization with asthma-like symptoms in susceptible individuals. MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized. Symptoms may include coughing, dryness of throat, headache, nausea, difficult breathing and a feeling of tightness in the chest. Effects may be delayed. Impaired lung function (decreased ventilator capacity) has been associated with overexposure to isocyanates. *Persons with known respiratory or allergy problems must not be exposed to this product.*
- **Skin Contact:** No irritation is likely to develop following short contact periods with skin. Prolonged or repeated exposure can cause skin irritation, reddening, dermatitis, and in some individuals, sensitization. Skin contact may result in allergic skin reactions or respiratory sensitization, but is not expected to result in absorption of amounts sufficient to cause other adverse effects. May stain skin.
- **Eye Contact:** As a liquid or dust, may cause irritation, inflammation, and/or damage to sensitive eye tissue. Symptoms include watering or discomfort of the eyes. Corneal injury is unlikely.
- **Ingestion:** Single dose oral toxicity is considered to be extremely low. Can result in irritation and corrosive action in the mouth, stomach tissue and digestive tract.
- **Chronic:** As a result of previous repeated over-exposures or a single large dose, certain individuals develop isocyanate sensitization (chemical asthma) or tissue injury in the upper respiratory tract. Animal tests indicate skin contact alone may also lead to allergic respiratory reaction. These effects may be permanent. Any person developing asthmatic reaction or other sensitization should be removed from further exposure.
- **Carcinogenicity:** MDI and Polymeric MDI are not listed by the NTP, IARC or regulated by OSHA as carcinogens. Lung tumors have been observed in laboratory animals exposed to aerosol droplets MDI/Polymeric MDI (6 mg/m³) for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects.

Eyes: Flush eyes with plenty of water for at least 15 minutes. Materials containing MDI may react with the moisture of the eye forming a thick material which may be difficult to wash from the eyes. Seek medical attention.

Skin: Wash off in flowing warm water or shower with soap. Remove and wash contaminated clothing and discard contaminated shoes. If redness, itching or a burning sensation develops or persists after the area is washed, consult a physician.

Ingestion: If swallowed, drink 1 or 2 glasses of water or milk. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Seek medical attention.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility immediately.

NOTE TO PHYSICIAN:

Eyes: Stain for evidence of corneal injury. If cornea is burned, instill antibiotic steroid preparation frequently. Workplace vapors have produced reversible corneal epithelial edema impairing vision.

Skin: This compound is a known skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burns. If burned, treat as a thermal burn.

Ingestion: Treat symptomatically. There is no specific antidote. Inducing vomiting is contraindicated because of the irritating nature of this compound.

Inhalation: Isocyanates are known pulmonary sensitizers. Treatment is essentially symptomatic. An individual having a skin or pulmonary sensitization reaction to this material should be removed from exposure to any isocyanate compound.

SECTION VI -- REACTIVITY DATA

Stability: Polyisocyanates are highly reactive chemicals and should be handled and stored in a way to avoid exposure to many common substances, including water and moisture. Material is stable when stored in sealed containers under normal conditions. Avoid extended exposure over 110° F (45° C).

Hazardous

Polymerization: May occur with incompatible reactants especially strong bases, water or temperature over 320° F (160° C). Possible evolution of carbon dioxide gas from overheating or exposure to contaminants may rupture closed containers.

Reactivity: Reacts with water, acids, bases, alcohols, metal compounds. The reaction with water is very slow under 120° F (50° C), but is accelerated at higher temperatures and in the presence of alkalis, tertiary amines and metal compounds. Some reactions can be vigorous or even violent.

SECTION VII -- SPILL OR LEAK PROCEDURES

Spill: Evacuate spill area. With adequate ventilation and appropriate personal protective equipment, cover the area with an inert absorbent material such as clay or vermiculite and transfer to metal waste containers. Saturate with water or decontamination solution below, but do not seal the container with the isocyanate mixture. Larger quantities of liquid may be transferred directly to drums for disposal. Decontaminate or discard all clean-up equipment.

NOTE: *ISOCYANATES WILL REACT WITH WATER AND GENERATE CARBON DIOXIDE. THIS COULD RESULT IN THE RUPTURE OF ANY CLOSED CONTAINERS.*

Clean up: The area should then be flushed with a decontamination solution. The decontamination solution is a 5-10% mixture of sodium carbonate and 0.5% liquid detergent in water solution or a 3-8% concentrated ammonium hydroxide and 0.5% liquid detergent in water. Use 10 parts decontamination solution to 1 part spilled material. If the ammonium hydroxide solution is used, ammonia will be evolved as a vapor. Use caution to avoid exposure to high concentrations of ammonia. Allow to stand for 48 hours letting evolved carbon dioxide to escape.

Disposal: Any disposal practice must be in compliance with all federal, state and local laws and regulations. Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Waste characterization and disposal compliance are the responsibility solely of the part generating the waste or deciding to discard or dispose of the material. Product as sold is not a RCRA hazardous waste when disposed.

Do not allow material to enter sewers, a body of water, or contact the ground. Refer to RCRA 40 CFR 261, and/or any other appropriate federal, state or local requirements for proper classification information.

Container

Disposal: Drums/containers must be thoroughly drained to process or storage vessels before removal to an appropriate area for subsequent decontamination. Drums/containers must be decontaminated in properly ventilated areas by personnel protected from the inhalation of isocyanate vapors. Spray or pour 1 to 5 gallons of decontaminating solution into the drum, making sure the walls are well rinsed. Let the drum/container soak unsealed for 48 hours. Pour out the decontaminating solution and triple rinse the empty container. Puncture or otherwise destroy the rinsed container before disposal. *Do not* heat or cut empty containers with electric or gas torch.

Call CHEMTREC (800-424-9300) for chemical emergencies or spills during transportation.

SECTION VIII -- SPECIAL PROTECTION INFORMATION

Exposure: MDI contains reactive isocyanate groups. Use with adequate ventilation to keep airborne isocyanate level below TLV of 0.005 ppm TWA (ACGIH) and PEL 0.02 ppm ceiling (OSHA). These control limits do not apply to previously sensitized individuals or to individuals with existing respiratory disease, such as chronic bronchitis, emphysema or asthma. Respiratory protection may be needed where material is heated, sprayed or used in a confined space, or if TLV is exceeded. Never try to detect MDI vapor by odor.

Persons with known respiratory or allergic problems must not be exposed to this product.

Ventilation: MDI has a very low vapor pressure at room temperature. General/local ventilation typically control exposure levels very adequately. Uses requiring heating and/or spraying may require more aggressive engineering controls or personal protective equipment. Monitoring is required to determine engineering controls.

Respiratory Protection: A supplied air, full face mask, positive pressure or continuous flow respirator or a supplied air hood is required when airborne concentrations are unknown or exceed threshold values. A positive pressure self contained breathing apparatus can be used in emergencies or other unusual situations. All equipment must be NIOSH/MSHA approved and maintained. Air purifying (cartridge type) respirators are not approved for protection against isocyanates.

Eye Protection: Chemical splash goggles or safety glasses or full face mask must be used consistent with splash hazard present. If vapor exposure causes eye discomfort, use a full face piece respirator or supplied air hood.

Protective Clothing: Wear clothing, boots and gloves impervious to MDI under conditions of use. Materials may include butyl rubber, nitrile rubber, neoprene and Saranex® coated Tyvek®.

Other Protective

Equipment: An eyewash station and safety shower or other drenching facilities are recommended in the work area.

SECTION IX -- SPECIAL PRECAUTIONS

Storage: When stored between 15 and 30^o C (60 and 85^o F) in sealed containers, typical shelf life is 6 months or more from the date of manufacture. Consult technical data sheet for shelf life requirements affecting performance quality. Should freezing occur, the material must be thawed thoroughly and mixed until uniform. Opened containers must be handled to prevent moisture pickup.

Handling: Use personal protective equipment when transferring material to or from drums, totes or other containers. Safety glasses and gloves are the minimum protection. Additional precautions must be used when splash hazards are present. The reaction of polyols and isocyanates generates heat. Contact of the reacting materials with skin or eyes can cause severe burns and may be difficult to remove from the affected areas. Immediately wash affected areas with plenty of water and seek medical attention. In addition, such contact increases the risk of exposure to isocyanate vapors. Do not smoke or use naked lights, open flames, space heaters, or other ignition sources near pouring, frothing or spraying operations.

Special Emphasis for Spray Applications: Inspect the application area from the potential to expose other persons or for overspray to drift onto buildings, vehicles or other property. When spraying building exteriors, persons entering or exiting the building as well as those inside could be exposed to polyisocyanates due to wind conditions, open windows or air intakes. Do not begin application work until these potential problems have been corrected.

SECTION X -- TRANSPORTATION

DOT Hazard Classification:

UN #:

OSHA Status: This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA Status: On TSCA inventory.

CERCLA Reportable Quantity: 4,4' Diphenylmethane diisocyanate = 5,000 lbs

SARA Title III:

Section 302 Extremely Hazardous Substances:

None

Section 311/312 Hazard Categories:

Immediate Health Hazard, Delayed Health Hazard, Reactive Hazard

Section 313 Toxic Chemicals:

Polymethylene polyphenyl isocyanate	CAS Number: 9016-87-9	100%
Methylenebis (phenylisocyanate) (MDI)	CAS Number: 101-68-8	ca 50%

RCRA Status: MDI is not listed as a hazardous waste. However, under RCRA, it is the responsibility of the user of products to determine, at any time of disposal, whether a product meets any of the criteria for hazardous waste.

OTHER

The information contained in this Material Safety Data Sheet has been prepared in accordance with the OSHA Hazard Communication Standard CFR 1910.1200. This information relates specifically to the product designated and may not be valid for the product when used in combination with any other materials or products or in a particular process. The information is, to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness, whether originating within the company or not. The user should review this information, satisfy itself as to its suitability and completeness, and pass on the information to its employees or customers in accordance with applicable Federal, State, or Local hazard communications requirements. We do not accept responsibility for any loss or damage which may occur from the use of this information.

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