



MATERIAL SAFETY DATA SHEET

Ultra Bond-100™ – Component “A”

Revised Date: 4/14/08

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: Ultra Bond-100™ High Strength, Superior Adhesion, Spray Applied Polyurea
Component: “A”

Company: Specialty Products, Inc. (SPI)
2410 - 104th St Ct S, Ste D
Lakewood, WA 98499

Phone: 253.588.7101

Toll Free: 800.627.0773

Fax: 253.588.7196

EMERGENCY CONTACT: For Spills, Leaks, Fire or Exposure call **CHEMTREC**

Toll Free: 800.424.9300

International Calls: 703.527.3887

Fax: 913.321.1490

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<u>Name</u>	<u>CAS#</u>	<u>% W</u>
Reaction product of polyol with Modified Diphenylmethane isocyanate (Modified MDI)	Not Listed	60 - 100
Diphenylmethane Isocyanate (MDI)	26447-40	10 - 30
Contains: 4, 4' Diphenylmethane Isocyanate (4,4' MDI) (Approx. 12%)	101-68-8	

This material is classified as hazardous under OSHA Hazardous Communication Standard (29 CFR 1910.1200)

SECTION 3: HAZARDS IDENTIFICATION

OSHA/HCS Status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency Overview: **Danger!**
IRRITATING TO EYES AND SKIN.
HARMFUL IF SWALLOWED.
CAUSES RESPIRATORY TRACT IRRITATION.

Toxic if swallowed. Irritation to eyes, skin and respiratory system. Do not breathe vapor or mist. Do not ingest. Do not get in eyes or on skin or clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Section 3 Notes: [Read the entire MSDS for a more thorough evaluation of the hazards.](#)



SECTION 4: FIRST AID MEASURES

Eye Contact:	The aerosol, vapor or liquid will irritate human eyes following contact. Immediately flush eyes with running water for a minimum of 15 minutes. Hold eyelids open during flushing. If irritation persists, repeat flushing. Obtain medical attention immediately.
Skin Contact:	Moderate irritant. Repeated and/or prolonged contact may cause skin sensitization. There is limited evidence from animal studies that skin contact may play a role in respiratory sensitization. These results emphasize the need for protective clothing including gloves to be worn at all times when handling these chemicals or in maintenance work. Remove contaminated clothing. Wash affected areas thoroughly with soap and water. If irritation, redness or a burning sensation develops and persists, obtain medical attention. Contaminated clothing should be thoroughly cleaned before reuse.
Ingestion:	Ingestion may cause irritation of gastrointestinal tract. Based on the acute oral LD50, this product is considered practically non-toxic by ingestion. DO NOT induce vomiting. Provided patient is conscious, wash out mouth with water; then give 1 or 2 glasses of water to drink. Refer person to medical personnel for immediate attention.
Inhalation:	This product is a respiratory and potential respiratory sensitizer. Inhalation of vapor or aerosol at levels above the occupational exposure limit could cause respiratory sensitization and lung injury. Symptoms may include irritation to the eyes, nose, throat and lungs possible combined with dryness of the throat, tightness of chest and difficulty in breathing and/or flu like symptoms. The onset of the respiratory symptoms may be delayed for several hours after exposure. A hyper-reactive response to even minimal concentrations of MDI may develop in sensitized persons. In a single evaluation of 5 men occupationally exposed to MDI and hydrocarbon solvents vapors under conditions where adequate ventilation or other safety precautions were not used, neuropsychological findings were attributed to MDI. Move patient from area of exposure; keep warm and at rest. Obtain medical attention. Treatment is symptomatic for primary irritation or difficulty in breathing. If breathing is labored, oxygen should be administered by qualified personnel. Apply artificial respiration if breathing has ceased or signs of failing.
Notes to Physician:	Symptomatic treatment and supportive therapy as indicated. Administer oxygen if necessary. Following severe exposure the patient should be kept under medical review for at least 48 hours as delayed pulmonary oedema may develop.
Health Hazards	Irritating to eyes, respiratory system and skin. Inhalation at levels above the occupational exposure limit could cause respiratory sensitization. Risk of serious damage to respiratory system. The onset of the respiratory symptoms may be delayed for several hours after exposure. A hyper-reactive response to even minimal concentrations of MDI may develop in sensitized persons. Sensitized persons should not be exposed to any mixture containing reacted MDI>
Physical Hazards	Reacts slowly with water to produce carbon dioxide, which may rupture closed containers. This reaction accelerates at higher temperatures.



General In case of accident or if you feel unwell, seek medical attention immediately.

SECTION 5: FIRE-FIGHTING MEASURES

Flash Point: >230°F (110°C).

Extinguishing Media:

Suitable: Carbon dioxide, dry chemical, or appropriate foam. If water is used, very large quantities are required. Reaction between water and hot isocyanate may be vigorous. Contains run-off water with temporary barriers.

Not Suitable: None known.

Special Exposure Hazards: Containers may burst under intense heat. Due to reaction with water, a hazardous build-up of pressure could result if contaminated containers are resealed.

Special Protective Equipment for Firefighters: Use self-contained breathing apparatus and full protective clothing (Bunker Gear).

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: For major spills call **CHEMTREC** Toll Free 1.800.434.9300 or for International call 1.703.527.3887.

Personal Precautions: Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment.

Environmental Precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Methods for Cleaning Up: If emergency personnel are unavailable, contain spilled material. For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, dike spilled material or otherwise contained material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

SECTION 7: HANDLING AND STORAGE

General: Ideal storage temperature is 60-100°F (16-38°C). Handling and storage should be in accordance with Local, State/Provincial or Federal regulations.

Handling: Avoid personal contact with the product or reaction mixture. Use only with adequate



ventilation to ensure that the occupational exposure limit is not exceeded. The efficiency of the ventilation system must be monitored regularly because of the possibility of blockage. Avoid breathing aerosols, mists and vapors. When the product is sprayed or heated, and approved MSHA/NIOSH positive-pressure, supplied air-respirator may be required.

Storage:

Keep containers properly sealed and when indoors, in a well-ventilated area. Keep contents away from moisture. Due to reaction with water, producing CO₂ gas, a hazardous build-up of pressure could result if contaminated containers are resealed.

Do not reseal contaminated containers. Uncontaminated containers, free of moisture, may be resealed only after placing under a nitrogen blanket. Do not store in containers made of copper, copper alloys or galvanized surfaces.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Consult local authorities for acceptable exposure limits.

Preventive Measures:

Conditions of use, adequacy of engineering or other control measures, and actual exposures will dictate the need for specific protective devices at your workplace.

Engineering Controls:

Use local exhaust ventilation to maintain airborne concentrations below the TVL. Suitable respiratory equipment should be used in cases of insufficient ventilation or where operational procedures demand it. For guidance on engineering control measures refer to publications such as the ACGIH current edition of ‘Industrial Ventilation, a manual of Recommended Practice.’

Personal Protection

Eye Protection:

Chemical safety goggles. If there is a potential for splashing, use full-face shield.

Skin Protection:

The following protective materials are recommended:

GLOVES - neoprene, nitrile rubber, butyl rubber. Thin latex disposable gloves should be avoided for repeated or long-term use.

PROTECTIVE CLOTHING - should be selected and used in accordance with ‘Guidelines for the Selection of Chemical Protective Clothing’, published by ACGIH.

Respiratory Protection:

When this product is sprayed or heated without adequate ventilation, an approved MSHA/NIOSH positive pressure, supplied air respirator may be required. Air purifying respirators equipped with organic vapor cartridges and a HEPA (P100) particulate filter may be used under certain conditions when a cartridge change out schedule has been developed in accordance with the OSHA respiratory protection standard (29 CFR 1919.134).

Hands:

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Work Hygienic Practices:

Follow the usual precautionary measures for handling chemicals. Keep away from food and beverages. Immediately remove all soiled and contaminated clothing. Avoid contact with eyes, skin and clothing. Wash hands after use. Wash all contaminated clothing and shoes before reuse.



SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

General Appearance Information

Physical State: Liquid
Color: Pale Yellow
Odor: Slight Odor

Important Health, Safety and Environmental Information

Boiling Point: Not applicable
Melting Point: Not available
Flash Point: >230°F (110°C)
Flammable Limits/% (volume in air): Not available
Solubility: (water): Reacts with water
Solubility: (other): Soluble in most organic solvents
Specific Gravity: Approx. 1.08
Vapor Pressure: Approx. 4×10^6
Vapor Density: (air=1): Approx. 8.5
Volatile Organic Compounds (VOC): 0 grams/liter

SECTION 10: STABILITY AND REACTIVITY

Stability and Reactivity: Stable at room temperature

Incompatibility
(Materials to Avoid): This product will react with any material containing active hydrogen's such as water, alcohol, amines, bases and acids. The reaction with water is very slow under 50°C (122°F) but is accelerated at higher temperatures.

Hazardous Polymerization: Polymerization may occur at elevated temperatures in the presence of alkalis, tertiary amines and metal compounds.

Hazardous Decomposition Products: Highly unlikely under normal industrial use.

Conditions to Avoid: Avoid high temperatures. Avoid freezing.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicity Data

	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
Polymeric MDI	LD50	5,000 mg/kg	Oral	Rat
	LD50	5,000 mg/kg	Dermal	Rabbit
	LC50	490 mg/m ³ /4 hrs	Respirable	
	LC50	1,000 MG/L		Zebra Fish

At highest level tested of 1,000 mg/l there were no deaths



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EC50	>1,000 mg/l	24 hours	Daphnia Magna
EC50	>100 mg/l		E. Coli

Potential Acute Health Effects

Inhalation:	Irritating to respiratory system.
Eyes:	Irritating to eyes.
Skin:	Irritating to skin.

Potential Chronic Health Effects

Target Organs:	None known.
Carcinogenicity:	No known significant effects or critical hazards.
Mutagenicity:	No known significant effects or critical hazards.
Teratogenicity:	No known significant effects or critical hazards.
Developmental Effects:	No known significant effects or critical hazards.
Fertility Effects:	No known significant effects or critical hazards.

SECTION 12: ECOLOGICAL INFORMATION

Avoid uncontrolled releases of this material. Keep out of sewers, storm drains, surface waters and soil. Where spills are possible, a comprehensive spill response plan should be developed and implemented.

Spills or Leak Procedures:	Clean up should only be performed by trained personnel. People dealing with major spillages should wear full protective clothing including respiratory protection. Evacuate the area. Prevent further leakage, spillage or entry to drains. Contain and absorb large spillages onto an inert, nonflammable absorbent carrier (such as earth or sand). Shovel into open-top drums or plastic bags for further decontamination, if necessary. Wash the spillage area clean with liquid decontaminant. Test atmosphere for MDI vapor. Neutralize small spillages with decontaminant. Remove and dispose of residues. Notify applicable government authorities if release is reportable. The CERCLA RQ for MDI is 5,000 lbs. For major spills call Chemtrec (800-424-9300).
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Preparation of Decontamination Solution:	Prepare a decontamination solution of 0.2 – 0.5% 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 when preparing and using solution.
Use of Decontamination Solution:	Allow deactivated material to stand for at least 30 minutes before shoveling into drums. Do not tighten the bungs. Mixing with wet earth is also effective but slower.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method:	<ul style="list-style-type: none">Disposal should be in accordance with local, state, provincial or national regulations. This material is not a hazardous waste under RCRA 40 CFR 261.Small quantities should be treated with a decontamination solution. The treated waste is not a hazardous material under RCRA 40 CFR 261.
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- Chemical waste, even small quantities should never be poured down drains, sewers, or waterways.
- Empty containers should be decontaminated and either passed to an approved drum recycler or destroyed.

SECTION 14: TRANSPORTATION INFORMATION

EMERGENCY CONTACT: For Spills, Leaks, Fire or Exposure call **CHEMTREC**
Toll Free: 800.424.9300
International Calls: 703.527.3887
DOT Classification: Not Regulated
DOT Proper Shipping Name: Diphenylmethane Diisocyanate

SECTION 15: REGULATORY INFORMATION

United States

OSHA Classification: This product is classified as hazardous material under the criteria outlined in the OSHA Hazard Communication Standard (HCS) (20 CFR 1919.1200).

TSCA Regulations: All ingredients are on the TSCA Chemical Substance Inventory.

CERCLA: 4,4' - Methylene Diphenyl Diisocyanate (CAS 101-68-8) has a 5,000 lb. RQ.
Any spill or release above the RQ must be reported to the National Response Center (800-424-8802).

This product does not container

CERCLA: Hazardous Substances

SARA 313

4,4' - Methylene Diphenyl Diisocyanate (CAS 101-68-8) has a 5,000 lb. RQ.
Any spill or release above the RQ must be reported to the National Response Center (800-424-8802).
This product does not contain nor is it manufactured with ozone depleting substances.

Canada

This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations) and this MSDS contains all the information required by the CPR.

The substance(s) in this product is/are on the Canadian Domestic Substances List (CEPA DSL).

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

SECTION 16: OTHER INFORMATION

Label Requirements: IRRITATION TO EYES AND SKIN.
HARMFUL IF SWALLOWED.
CAUSES RESPIRATORY TRACT IRRITATION.



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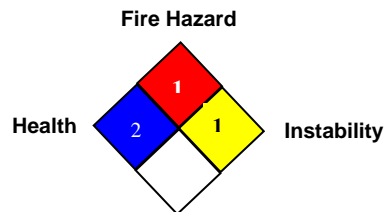
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HAZARDOUS MATERIAL INFORMATION SYSTEM (U.S.A.)

Health	2
Fire Hazard	1
Reactivity	1

NATIONAL FIRE PROTECTION ASSOCIATION (U.S.A.)



For Your Protection:

The information and recommendations in this publication is to the best of our knowledge, reliable. The toxicity and risk characteristics of products made by SPI will necessarily differ from the toxicity and risk characteristics that occur when such products are used with other materials during a manufacturing process. The resulting risk characteristics should be determined and made known to ultimate end-users and processors. The user is responsible to comply with all applicable federal, provincial or municipal laws and regulations. SPI MAKES NO WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Preparation Information:

This MSDS supersedes ALL previous MSDS versions.