



SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: Polyprime-100™
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>
Polymeric Diphenylmethane Diisocyanate (polymeric MDI)	Not Listed	80 -100
Contains: 4,4'-Diphenylmethane Diisocyanate (polymeric MDI)	0.005 ppm	
Modified Polymeric MDI	Not Listed	1 - 10
Modified MDI	Not Listed	-30 - 60

SECTION 3: HAZARDS IDENTIFICATION

Physical State: Liquid.

Odor: Slight.

OSHA/HCS status: This material is classified as hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency Overview: **WARNING**
Irritating to eyes, respiratory system and skin. Risk of serious damage to respiratory system. May cause sensitization by inhalation and skin contact. Repeated inhalation of aerosol at levels above the occupational exposure limit could cause respiratory sensitization. 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.

Reacts slowly with water to produce carbon dioxide which may rupture closed containers. This reaction accelerates at higher temperatures.

General Information: [Read the entire MSDS for a more thorough evaluation of the hazards.](#)



SECTION 4: FIRST AID MEASURES

Eye 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:	Remove contaminated clothing. Wash affected areas thoroughly with soap and water. If irritation, redness, or a burning sensation develops and persists, obtain medical advice. Contaminated clothing should be thoroughly cleaned before reuse.
Ingestion:	DO NOT induce vomiting. Provided the 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:	Remove patient from exposure, keep warm and at rest. Obtain medical attention. Treatment is symptomatic for primary irritation or bronchospasm. If breathing is labored, oxygen should be administered by qualified personnel. Apply artificial respiration if breathing has ceased or shows signs of failing
Notes to Physician:	Symptomatic- and supportive therapy as needed following severe exposure. In such cases, medical follow-up should be maintained for at least 48 hours.
General	In case of accident or if you feel unwell, seek medical advice IMMEDIATELY (show the MSDS where possible).

SECTION 5: FIRE-FIGHTING MEASURES

Flash Point:	Closed cup: >397°F (208.8°C) .
Products of Combustion:	Carbon monoxide, carbon dioxide, nitrogen oxides and some HCN.
<u>Extinguishing Media</u>	
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. Contain run-off water with temporary barriers.
Not Suitable:	None known.
Special Exposure Hazards:	None known.
Special Protective Equipment for Fire-fighters:	As appropriate for surrounding materials/equipment. Use self-contained breathing apparatus and full protective clothing (Bunker gear).
Unusual Fire and Explosion Hazards:	Containers may burst under intense heat. Due to reaction with water, a hazardous buildup of pressure could result if contaminated containers are resealed.
Flammable Limits (lower)	Not available
Flammable Limits (upper)	Not available
Auto Ignition Temperature	240°C (464°F) (4,4' – Diphenylmethane Diisocyanate)
Decomposition Temperature	Not Available
Rate of Burning	Not Available
Explosive Power	None



Sensitivity to Mechanical Impact None
Sensitivity to Static Discharge None

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. Evacuate the area. Keep upwind to avoid inhalation of vapors. Clean-up should only be performed by trained personnel. People dealing with major spillages should wear full protective clothing including respiratory protection. Use suitable protective equipment (See SECTION 8-Exposure Controls for details).

Environmental Precautions: Evacuate the area. Prevent further leakage, spillage or entry into drains.

Methods for Cleaning Up: 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 (see CERCLA in Section 15).

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 7: HANDLING AND STORAGE

General: Ideal storage temperature is 16°C - 38°C (60°F - 100°F).

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, an approved MSHA/NIOSH positive-pressure, supplied-air respirator may be required.

Storage: Keep containers properly sealed and when stored indoors, in a well ventilated area. Keep contents away from moisture.

Decontamination Solution: 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.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION



Product Name & Exposure Limits: Diphenylmethane 4,4' Dissocyanate

Exposure Limits

ACGIH TLV (United States, 1/2006)

TWA: 0.005 mg/m³ 8 hour/hours

TWA: 0.005 ppm 8 hour/hours

NIOSH REL (United States, 12/2001)

CEIL: 0.2 mg/m³ 10 minute/minutes

CEIL: 0.02 ppm 10 minute/minutes

CEIL: 0.05 mg/m³ 10 hour/hours

CEIL: 0.005 ppm 10 hour/hours

OSHA PEL (United States, 8/1997)

CEIL: 0.2 mg/m³

CEIL: 0.02 ppm

OSHA PEL 1989 (United States, 3/1989)

CEIL: 0.20 mg/m³

CEIL: 0.02 ppm

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 TLV. 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 the ACGIH publication "Industrial Ventilation".

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

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

Skin Protection: Protective clothing should be selected and used in accordance with "Guidelines for the Selection of Chemical Protective Clothing" published by ACGIH.

Respiratory 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.

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.

Other Protection: Consult your supervisor or S.O.P. for special handling instructions. Medical supervision of all employees who handle or come in contact with respiratory sensitizers is recommended. Persons with respiratory problems including asthmatic-type conditions, chronic bronchitis, other chronic respiratory diseases or recurrent skin eczema or skin allergies should be evaluated for their suitability of working with this product. Once a person is diagnosed as sensitized, no further



exposure to the material that caused the sensitization should be permitted.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

General Information

Physical State:	Liquid.
Color:	Brown.
Odor:	Slight.
Odor Threshold:	0.4 (4,4' Diphenylmethane Diisocyanate)

Important Health, Safety and Environmental Information

pH:	Not applicable.
Boiling Point:	Not applicable.
Melting/Freezing Point:	Not available.
Flash Point:	208.8°C (397°F)
Solubility (water):	Reacts with water
Solubility (other):	Soluble in most organic solvents
Specific Gravity:	1.24
Evaporation Rate:	Not available.
Vapor Pressure:	0.0003 mm Hg at 20°C
Vapor Density (AIR=1):	8.5 approx.

Other Information

Volatile Organic Compounds (VOC):0 grams/liter

SECTION 10: STABILITY AND REACTIVITY

Stability & Reactivity:	Stable at room temperature.
Incompatibility with Various Substances:	This product will react with any materials containing active hydrogens 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 Decomposition or by-Products:	Highly unlikely under normal industrial use. See Section 5.
Hazardous Polymerization:	Polymerization may occur at elevated temperatures in the presence of alkalies, tertiary amines and metal compounds.
Conditions of Instability:	Avoid high temperatures. Avoid freezing.

SECTION 11: TOXICOLOGICAL INFORMATION

<u>Toxicity to Animals</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
Polymeric MDI	LC50	>1000 mg/l		Zebra Fish



(At highest level tested of 1000 mg/l there were no deaths)

Propylene carbonate

EC50
EC50

>1000 mg/l
>100 mg/l

Daphia magna
E. Coli

Acute Toxicity

Ingestion:

Ingestion may cause irritation of the gastrointestinal tract. Based on the acute oral LD50, this product is considered practically nontoxic by ingestion.

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, possibly 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, neuropsychologic findings were attributed to MDI.

Eyes:

The aerosol, vapor or liquid will irritate human eyes following contact.

Skin:

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.

Potential Chronic Health Effects

Carcinogenic Effects:

The ingredients of this product are not classified as carcinogenic by ACGIH or IARC, not regulated as carcinogens by OSHA, and not listed as carcinogens by NTP.

Mutagenic Effects:

There is no substantial evidence of mutagenic potential.

Teratogenicity/

No birth defects were seen in two independent animal (rat) studies. Fetotoxicity was observed at doses that were extremely toxic (including lethal) to the mother. Fetotoxicity was not observed at doses that were not maternally toxic. The doses used in these studies were maximal, respirable concentrations well in excess of the defined occupational limits.

Reproductive Toxicity:

Chronic Effects:

A study was conducted where groups of rats were exposed for 6 hours/day, 5 days/week for a lifetime to atmospheres of respirable polymeric MDI aerosol either at concentrations of 0, 0.2, 1 or 6 mg/m³. No adverse effects were observed at 0.2 mg/m³ concentrations. At the 1 mg/m³ concentration minimal nasal and lung irritant effects were seen. Only at the top concentration (6.0 mg/m³) there was an increased incidence of a benign tumor of the lung (adenoma) and one malignant tumor (adenocarcinoma). Overall, the tumor incidence, both benign and malignant, and the number of animals with tumors were not different. The increased incidence of lung tumors is associated with prolonged respiratory irritation and the concurrent accumulation of yellow material in the lung. In the absence of prolonged exposure to high concentrations leading to chronic irritation and lung damage, it is highly unlikely that tumor formation will occur.

SECTION 12: ECOLOGICAL INFORMATION





Diphenylmethane 4,4'-diisocyanate: Zebra Fish (LC50)	>1000 mg/l
Daphnia Magna (EC50)	>1000 mg/l

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: The generation of waste should be avoided or minimized wherever possible.

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 decontaminant solution (See Section 6). The treated waste is not a hazardous material under RCRA 40 CFR 261. 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
TDG:	Not Regulated
IMO:	Not Regulated
IATA/ICAO Class:	Not Regulated

SECTION 15: REGULATORY INFORMATION

United States

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

OSHA Classification:

Physical:	Not regulated.
Health:	Highly toxic, respiratory sensitizer, skin sensitizer, irritant.
Target Organ:	Respiratory Tract, Skin.

U.S. Federal Regulations:

TSCA Regulations: All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory. This Product does not contain nor is it manufactured with ozone depleting substances.

SARA 313

This product contains the following toxic chemical(s) subject to reporting requirements: <45% 4,4 - Diphenylmethane Diisocyanate (CAS 101-68-8) This product does not contain nor is it manufactured with ozone depleting substances.

CERCLA:

4,4-Methylene Diphenyl Diisocyanate (CAS 10-68-8) has a 5,000 lb. RQ (reportable quantity). Any spill or release above the RQ must be reported to the National Response Center (800-424-8802). The % of 4,4',-MDI in this product is listed in Section 2 of this MSDS.



Form R - Reporting Requirements:	Diphenylmethane 4,4'-diisocyanate	101-68-8	22%
Supplier Notification:	Diphenylmethane 4,4'-diisocyanate	101-68-8	22%

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State Regulations Massachusetts Right-to-know, Pennsylvania Right-to-know, New Jersey Right-to-know CERCLA

Canada

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulations) and the MSDS (Material Safety Data Sheet) contains all the information required by the CPR.

WHMIS (Canada):

WHMIS Class D-1A: Material causing immediate and serious toxic effects (very toxic).
 WHMIS Class D-2A: Material causing other toxic effects (very toxic).
 WHMIS Class D-2B: Material causing other toxic effects (toxic).

CEPA DSL/NDSL: All ingredients listed.

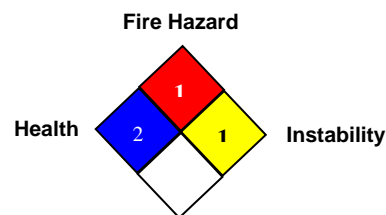
SECTION 16: OTHER INFORMATION

Label requirements: Harmful by inhalation. Irritating to eyes and respiratory system. May cause sensitization by inhalation and skin contact. This product is a respiratory irritant and potential respiratory sensitizer. Repeated inhalation of vapor or aerosol at levels above the occupational exposure limit could cause respiratory sensitization. A hyper-reactive response to even minimal concentrations of diisocyanates may develop in sensitized persons. The onset of the respiratory symptoms may be delayed for several hours after exposure.

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.