

**MATERIAL SAFETY DATA SHEET**

Envelo-Seal™ 0.5 OC "A" Component

Revised Date: 06/27/12NP

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: Envelo-Seal™ 0.5 OC

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

Name	CAS#	% W
Polymeric Diphenylmethane	9016-87-9	>55
Methylene Diphenyldiisocyanate	101-68-8	>45

SECTION 3: HAZARDS IDENTIFICATION

Physical State: Dark brown liquid.

Odor: Slightly musty odor.

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. Inhalation at levels above the occupational exposure limit could cause respiratory sensitization. May cause 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 unreacted MDI.

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

SECTION 4: FIRST AID MEASURES

Eye Contact: Can cause eye irritation. Symptoms include stinging, tearing, redness and swelling of eyes. Prolonged exposure may cause temporary corneal injury. If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.



Skin Contact:	Can cause skin irritation. Symptoms may include redness and burning of skin, and other skin damage. Additional symptoms of skin contact may include: allergic skin reaction (delayed skin rash which may be followed by blistering, scaling and other skin effects) Remove contaminated clothing. Flush exposed area with large amounts of water. If skin is damaged, seek immediate medical attention. Launder clothing before reuse.
Ingestion:	Swallowing this material may be harmful or fatal. Symptoms may include severe stomach and intestinal irritation (nausea, vomiting, diarrhea), abdominal pain, and vomiting of blood. Swallowing this material may cause burns and destroy tissue in the mouth, throat, and digestive tract. Low blood pressure and shock may occur as a result of severe tissue injury. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury. Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.
Inhalation:	At room temperature vapor concentrations are low due to the low volatility of this material and are not likely to cause harmful effects. At concentrations above the TLV or PEL, vapors may cause respiratory irritation or other adverse effects. Symptoms may include runny nose, sore throat, coughing, chest discomfort, shortness of breath, and reduced lung function. Acute exposure may result in irritation of the upper respiratory tract and lungs and cause pulmonary edema (fluid in the lungs). Some individuals may become permanently sensitized to this material and experience asthma-like symptoms even at levels well below recommended exposure guidelines. These effects may be delayed and may be life threatening. Overexposure may result in fibrosis and permanent decreased lung function. If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen. Monitor individual for the development of asthmatic symptoms, which may be immediate or develop after several hours.
Notes to Physician:	Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: irritation (nose, throat, airways), allergic reaction (causes narrowing of the air passages of the lungs, sweating, flushing, hives, rapid heart rate and lowered blood pressure). This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity (See Section 3-Swallowing) when deciding whether to induce vomiting. Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: respiratory tract, skin, lung (for example, asthma-like conditions).
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:	446°F (230°C)
Auto Ignition Temperature:	No Data
Combustion Products:	May form: carbon dioxide and carbon monoxide, hydrogen cyanide, nitrogen compounds and various hydrocarbons.
Extinguishing Media	Dry chemical; Carbon Dioxide; Foam; Water spray for large fires.
Special Fire Fighting Procedures:	Water or foam may cause frothing which can be violent and possibly endanger the life of the firefighter. Full emergency equipment with self-contained breathing apparatus and full protective clothing should be worn by firefighters. During a fire, MDI vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. (See Stability and Reactivity). At temperatures greater than 400 F (204 °C), polymeric MDI can polymerize and decompose which can cause pressure build-up in closed containers. Explosive rupture is possible. Therefore, use cold water to cool fire-exposed containers.
Unusual Hazards:	Containers may burst under intense heat. Due to reaction with water, a hazardous build-up of pressure could result if contaminated containers are re-sealed.
Physical Hazards:	Reacts slowly with water to product carbon dioxide, which may rupture closed containers. This



Explosive Hazard: reaction accelerates at higher temperatures.
Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Spill or Release Procedures: Evacuate and ventilate the spill area; dike spill to prevent entry into water system; wear full protective equipment, including respiratory equipment during clean-up. (See Employee Protection Recommendations).

Major Spill: If temporary control of isocyanate vapor is required, a blanket of protein foam (available at most fire departments) may be placed over the spill. Large quantities may be pumped into closed, but not sealed, container for disposal.

Minor Spill: Absorb isocyanates with sawdust or other absorbent, shovel into suitable unsealed containers, transport to well ventilated area (outside) and treat with neutralizing solution: mixture of water (80%), with non-ionic surfactant Tergitol TMN-10 (20%), or; Water (90%), concentrated ammonia (3-8%) and detergent (2%). Add about 10 parts of neutralizer per part of isocyanate, with mixing. Allow to stand uncovered for 48 hours to let CO₂ escape.

Clean Up: Decontaminate floor with decontamination solution letting stand for at least 15 minutes

SECTION 7: HANDLING AND STORAGE

Storage Temperature: Ideal storage temperature is 20°C – 25°C (68°F – 77°F)

Shelf Life: Twelve months

Handling: Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

Storage: Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected. Avoid contact with skin and eyes. Do not breathe aerosols or vapors. Warning properties (irritation of the eyes, nose and throat or odor) are not adequate to prevent chronic overexposure from inhalation. This material can produce asthmatic sensitization upon either a single inhalation exposure to relatively high concentrations or repeated exposures to low concentrations. Exposure to vapors of heated MDI can be extremely dangerous.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Local exhaust should be used to maintain levels below the TLV whenever MDI is processed, heated or spray applied. Standard reference sources regarding industrial ventilation (i.e., ACGIH Industrial Ventilation) should be consulted for guidance about adequate ventilation.

Eye/Face Protection: Liquid chemical goggles. Vapor resistant goggles should be worn when contact lenses are in use. In a splash hazard environment chemical goggles should be used in combination with a full face-shield.

Skin Protection: Permeation resistant gloves (butyl rubber, nitrile rubber, polyvinyl alcohol). However, please note that PVA degrades in water. Cover as much of the exposed skin area as possible with appropriate clothing. If skin creams are used, keep the area covered by the cream to a minimum.

Respiratory Protection: Concentrations greater than the TLV can occur when MDI is sprayed, heated or used in poorly ventilated area. In such cases, or whenever concentrations of MDI exceed the TLV or are not known, respiratory protection must be worn. A supplied air respirator (either positive pressure or continuous flow type) is required. In an emergency situation, a self contained breathing apparatus may be used. MDI has poor warning properties, since the concentration at which MDI can be



Preventive Measures:

smelled is substantially higher than the maximum exposure limit. Observe OSHA regulations for respirator use (29 CFR 1910.134).

Exposure Guidelines:

Isocyanate exposure levels must be monitored. Monitoring of airborne isocyanates in the breathing zone of individuals should become part of the overall employee exposure characterization program. Monitoring techniques have been developed by NIOSH, and OSHA.

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. Safety showers and eyewash stations should be available. Educate and train employees in safe use of product. Follow all label instructions.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

General Information

Physical State: Dark brown liquid
Odor: Slightly musty odor

Important Health, Safety and Environmental Information

Boiling Point: Not Available
Melting/Freezing Point: Not Available
Solubility (water): Not soluble. Reacts slowly with water to liberate CO₂ gas.
Specific Gravity: 1.25 @ 77°F. (25°C.)
Vapor Pressure: 10⁻⁴ MAX mm Hg/40°C
Viscosity: 200±50 mPas

Other Information

Volatile Organic Compounds (VOC): 0 grams/liter

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability: This is a stable material under recommended storage conditions
Conditions to avoid: Contamination with water and high temperatures (greater than 400°F. (204°C))

Hazardous Decomposition Products: By high heat and fire: carbon monoxide, oxides of nitrogen, traces of HCN, MDI vapors or aerosols.

Hazardous Polymerization: May occur: Contact with moisture, other materials will react with isocyanates, or temperatures above 400°F. (204°C.) may cause polymerization.

Incompatibilities with Other Substances: Water, amines, strong bases, alcohols and polyols will react with MDI generating heat and possible off-gasses (carbon dioxide, in the case of water). If allowed to continue, these reactions may become increasingly exothermic and cause closed-container rupture. Avoid contact with metals such as copper alloys, tin, zinc and aluminum: corrosion may result.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Oral Toxicity: LD₅₀ (Rats) > 5,000 mg/kg
Skin Irritation: LD₅₀ (Rabbit) > 5,000 mg/kg
Inhalation Toxicity: LC₅₀ (rat) = 490 mg/m³/4 hours (respirable aerosol) In a two-year inhalation study in rats, exposure to polymeric methylene bisphenylisocyanate (MDI) aerosol caused a significant increase



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in benign (non-carcinogenic) lung tumors, along with a single carcinogenic lung tumor, at the highest dose only (6 mg/m³). The tumors occurred along with irritation of the respiratory tract and the accumulation of a yellow material in the lungs. There was irritation only at 1.0 mg/m³ and no effect at 0.2 mg/m³. MDI is not listed as carcinogenic by IARC, NTP or OSHA.

SECTION 12: ECOLOGICAL INFORMATION

No Data

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: The generation of waste should be avoided or minimized wherever possible. Avoid disposal of spilled material into soil, waterways, drains, and sewers. Do not discharge into waterways or sewer system without proper regulatory authorization. Disposal of this product and any related waste by-products must be handled in accordance with Federal, State, and local environmental regulations. Wastes must be tested using methods described in 40 CFR 261.7 to determine if it meets applicable definitions of hazardous waste.

Empty Container Disposal: Empty containers must be disposed of at a Resource Conservation and Recovery Act (RCRA) licensed facility, handled via an approved, certified drum recycler/disposal service, or decontaminated using approved methods described/mandated by Federal, State, Local waste disposal authority requirements and disposed of accordingly.

Contact supplier if guidance is required.

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 Non-Bulk
Not Regulated

Land Transportation (DOT):

Proper Shipping Name: Other regulated substances, liquid, n.o.s. (contains 4,4'-diphenylmethane diisocyanate (MDI))

Hazard Class or division : 9

UN/NA Number: NA3082

Packaging Group: III

Hazard Label (s): Class 9

IMDG

Proper Shipping Name: Environmentally Hazardous Substances, Liquid, NOS

Technical Name: MDI

Hazard Class: 9 **ID number:** UN3082 **Packing Group:** PG III

EMS Number: F-A, S-F

Marine pollutant: No

ICAO/IATA



Not Regulated

Additional Information

Reportable Quantity: 5,000 lb

SECTION 15: REGULATORY INFORMATION

United States

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

OSHA STATUS:

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

TSCA STATUS:

TSCA (United States) The intentional ingredients of this product are listed.

SARA TITLE III:

SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES: NONE

SECTION 311/312 HAZARD CATEGORIES:

Acute Health Hazard; Chronic Health Hazard

SECTION 313 TOXIC CHEMICALS:

Polymeric Diphenylmethane Diisocyanate, CAS# 9016-87-9, 100% Contained in this polymeric MDI product is 4,4- Diphenylmethane Diisocyanate, CAS# 101-68-8; Upper Bound 45%

EPA ACCIDENTAL RELEASE PREVENTION 40 CFR 68:

None Listed

STATE RIGHT-TO-KNOW INFORMATION:

Massachusetts, New Jersey or Pennsylvania Right-to-Know Substance Lists:

Weight %	Components	CAS-No.
40-55%	Polymeric Diphenylmethane Diisocyanate (Polymeric MDI)	9016-87-9
35-45%	4,4'-Diphenylmethane Diisocyanate (MDI)	101-68-8
1-15%	Diphenylmethane Diisocyanate (MDI)	26447-40-5

INTERNATIONAL REGULATIONS INVENTORY STATUS:

DSL (Canada) The intentional ingredients of this product are listed.



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State Regulatory Information:

Massachusetts Right-To-Know

Pennsylvania Right-To-Know

New Jersey Right-To-Know

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.

SECTION 16: OTHER INFORMATION

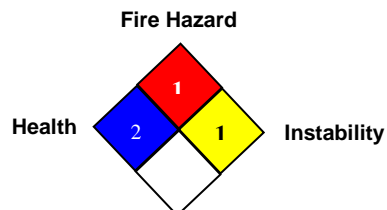
Label requirements:

Causes damage to the following organs: Lungs, Respiratory Tract, Skin, Eyes. May be harmful if inhaled, may cause respiratory tract, eye and skin irritation, may cause allergic respiratory and skin reaction.

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

Health	2
Fire Hazard	1
Reactivity	0

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.



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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: Envelo-Seal™ 0.5 OC
Component: “B”

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**
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Fax: 913.321.1490

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<u>Name</u>	<u>CAS#</u>	<u>% W</u>	<u>Exposure Limits</u>
Polyether Polyols	Trade Secret	13 - 30	
Tris (2-chloro-1-methylethyl) phosphate	13674-84-5	13 - 30	
Nonylphenol ethoxylated	9016-45-9	10 - 20	
Tertiary Amine	Trade Secret	3 - 7	
Bis (2-dimethylaminoethyl) ether	3033-62-3	1 - 7	

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!
HARMFUL IF ABSORBED THROUGH SKIN
CAUSES RESPIRATORY TRACT IRRITATION
MAY BE HARMFUL IF SWALLOWED

Harmful if swallowed. Irritating to respiratory system. Do not breathe vapor or mist. Do not ingest. Do not get in eyes or on skin or clothing. Use only 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:	Get medical attention immediately. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
Skin Contact:	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion:	Get medical attention immediately. Wash out mouth with water. Move exposed person to fresh air. Do not induce vomiting unless directed to do so by medical personnel. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person.
Inhalation:	Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health affects persist or are severe. If unconscious, place in recover position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt, or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Notes to Physician:	Symptomatic treatment and supportive therapy as needed. Following severe exposure medical follow-up should be monitored for at least 48 hours as delayed pulmonary oedema may develop.

SECTION 5: FIRE-FIGHTING MEASURES

Flash Point:	Closed cup: >230°F (110°C)
<u>Extinguishing Media:</u>	
Suitable:	Dry chemical, foam, carbon dioxide, water fog.
Not Suitable:	None known.
Fire Fighting Equipment/Instructions	Firefighter should wear full fire-fighting turn-out-gear (full Bunker gear) including NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.



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. Stay up wind. Keep out of low areas. Ventilate closed spaces before exiting. Use suitable protective equipment.
Environmental Precautions:	Contain all spills and leaks to prevent discharge to the environment. Avoid contact with liquied and vapors. Collect for disposal. This product is toxic to fish. Avoid discharge to natural waters. Avoid sparks, fires, and open flames, and use non-sparking equipment. Wear suitable protective equipment. Soak up with absorbent. Shovel into waste containers. Flush area with water. Recover spilled material for reprocessing or disposal.
Methods for Cleaning Up:	Recover liquid or dispose waste material (incineration is preferred) in accordance with all applicable federal, state, and local regulations and laws. Material collected with absorbent maybe disposed of in a permitted landfill in accordance with all applicable federal, state, and local regulations and laws.

SECTION 7: HANDLING AND STORAGE

General:	Ideal storage temperature is 65°F-75°F (18°C-24°C). Handling and storage should be in accordance with Local, State/Provincial or Federal regulations. Average shelf life is 6 months from date of manufacture.
Handling:	Avoid contact with skin and eyes. Wash thoroughly after handling. As with all chemicals, good industrial hygiene practices should be followed when handling this material.
Storage:	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. If contamination with isocyanates is suspected, do not reseal container because of possible rupture due to pressure buildup. Always slowly vent container when opening to relieve any pressure buildup.
Special Sensitivity:	This product is hygroscopic. Containers should be tightly sealed to prevent moisture contamination. Do not expose to high temperatures for any length of time.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION



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Consult local authorities for acceptable exposure limits.

<u>Product Name</u>	<u>Exposure Limits</u>
Bis (2-dimethylaminoethyl) ether	ACGIH TLV (United States, 1/2006). Skin Notes: 2000 adopostion STEL: 0.15 ppm 8 hour/hours TWA: 0.05 ppm 8 hour/hours
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.'
<u>Personal Protection</u>	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, or dusts.
Eye Protection:	
Skin Protection:	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Cover as much exposed skin as possible with appropriate clothing. If skin creams are used, keep the area covered by the cream to a minimum.
Respiratory Protection:	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Hands:	Chemical-resistant, impervious gloves such as natural rubber or polyvinyl alchol 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. Wash hands after use, before eating, drinking, smoking, or using the toilet.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

General Appearance Information

Physical State:	Liquid
Color:	Not available
Odor:	Not available
Odor threshold	Not available

Important Health, Safety and Environmental Information

pH	Not available
Boiling Point:	Not available

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Melting Point/Freeze Point:	Not available
Flash Point:	Closed cup: >230°F (110°C)
Explosive Properties	Not available
Oxidizing Properties	Not available
Octanol/water partition Coefficient	Not available
Viscosity:	175 cP @ 77°F (25°C)
Vapor Density:	Not available

SECTION 10: STABILITY AND REACTIVITY

Stability and Reactivity:	The product is stable under normal conditions
Incompatibility (Materials to Avoid):	This product may react with strong oxidizing agents
Hazardous Polymerization:	Will not occur.
Hazardous Decomposition Products:	At thermal decomposition temperatures Carbon monoxide and Carbon dioxide.

SECTION 11: TOXICOLOGICAL INFORMATION**Toxicity Data**

Product/ingredient name	Test	Result	Route	Species
Polyether polyol	LD50	>5000 mg/kg	Oral	Rat
	LD50	>2000 mg/kg	Dermal	Rabbit
Tris(2-chloro-1-methylethyl) phosphate	LD50	2800 to 4200 mg/kg	Oral	Rat
	LD50	>5000 mg/kg	Dermal	Rabbit
	LC50	>4.6 mg/l (4 hour/hours)	Inhalation	Rat
	LD50	200 to 2000 mg/kg	Oral	Rat
Nonyphenol, ethoxylated	LD50	>1580 mg/kg	Oral	Rat
	LD50	>2000 mg/kg	Dermal	Rabbit
N,N,N'-trimethylaminoethyl Ethanolamine	LD50	>2.7 mg/l (4 hour/hours)	Inhalation	Rat
	LC50			
Bis (2-dimethylaminoethyl) ether	LD50	570 mg/kg	Oral	Rat
	LD50	750 mg/kg	Dermal	Rabbit
	LC50	0.5 to 1.15 mg/l (4 hour/hours)	Inhalation	Rat

Acute toxicity

Ingestion	Harmful if swallowed
Inhalation	Irritating to respiratory system.
Eyes	Slightly irritating to the eyes.
Skin	Toxic in contact with skin
Remarks	This chemical has produced mild skin sensitization in an animal study. However, skin



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Potential Chronic Health Effects

Carcinogenic effects

Mutagenic effects

Teratogenicity/Reproductive toxicity

sensitization has not been seen in humans following many years experience in the manufacture and use of this chemical. (Polyether Polyol)

No known significant effects or critical hazards.

No known significant effects or critical hazards.

No known significant effects or critical hazards.

SECTION 12: ECOLOGICAL INFORMATION

Bis (2-dimethylaminoethyl) ether	Algae (IC50)	72 hours/hours	23 ppm mg/l
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Other ecological information

Persistence/degradability

Ingredient Name

Aquatic half-life

Photolysis

Biodegradability

Nonyophenol, ethoxylated

-

-

Not readily

Bioaccumulative potential

Ingredient Name

LogPow

BCF

Potential

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method:

The generation of waste should be avoided or minized wherever possible. Avoid disposal of spilled material into soil, waterways, drains, and sewers. Do not discharge into waterways or sewer system without proper regulatory authorization. Disposal of this product and any related waste by-products must be handled in accordance with Federal, State, and local environmental regulations. Wastes must be tested using methods described in 40 CFR 261.7 to determine if it meets applicable definitions of hazardous waste.

Empty Container Disposal:

Empty containers must be disposed of at a Resource Conservation and Recovery Act (RCRA) licensed facility, handled via an approved, certified drum recycler/disposal service, or decontaminated using approved methods described/mandated by Federal, State, Local waste disposal authority requirements and disposed of accordingly.

Contact supplier if guidance is required.

SECTION 14: TRANSPORTATION INFORMATION

EMERGENCY CONTACT:

For Spills, Leaks, Fire or Exposure call **CHEMTREC**

Toll Free: 800.424.9300

International Calls: 703.527.3887

Regulatory Information	UN Number	Proper shipping name	Class	PG*	Label	Additional Information
DOT Classification	Not Regulated					
TDG Classification	Not Regulated					
IMDG Class	Not Regulated					



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IATA-DGR Class

Not Regulated

SECTION 15: REGULATORY INFORMATION

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

United States

HCS Classification

Toxic material Corrosive material

US Federal regulations

TSCA 8 (b) inventory: All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

CERCLA: Hazardous

substances

Components

Concentrations

Section 304 CERCLA
Hazardous
Substances

CERCLA Reportable
Quantity

Product Reportable
Quantity

Toluene Ethylene oxide

0.015
0.00015

Listed
Listed

1000
10

66666667
66666667

SARA 313

No ingredients listed

This product does not contain nor is it manufactured with ozone depleting substances.

California Prop 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Ingredient Name

Cancer

Reproductive

No significant risk level

Maximum acceptable dosage level

Toluene

No

Yes

No

7000 pg/day
(ingestion)
13000 pg/day
(inhalation)

1,4-dioxane

Yes

No

Yes

No

Ethylene oxide

Yes

Yes

Yes

Yes

Canada

WHMIS (Canada)

Class D-1B Material causing immediate and serious toxic effects (Toxic).

Class D-2B: Material causing other toxic effects (Toxic).

CEPA (DSL)

Canada Inventory: All ingredients listed.

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



MATERIAL SAFETY DATA SHEET

Envelo-Seal 0.5™ — Component “B”

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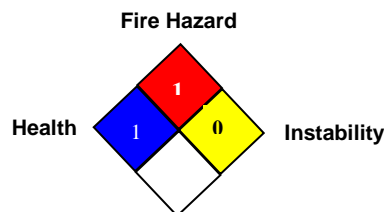
SECTION 16: OTHER INFORMATION

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

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

Health	1
Fire Hazard	1
Reactivity	0

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.