SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: Polyshield HT Slow™
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

Name	CAS#	% W
Diphenylmethane Diisocyanate	26447-40-5	-42
Contains: 4, 4' – MDI (-22%)	101-68-8	
Reaction product of polyol with MDI Isomers		
Modified MDI	N/A	-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
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.

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. Remove any contact lenses that might be worn by the victim. Obtain medical attention immediately.
Skin Contact:	R remove contaminated clothing. Wash affected areas thoroughly with soap and water. If irritation, redness, or a burning sensation develops and persists, obtain medical attention immediately. Contaminated clothing and shoes should be properly laundered before reusing. An MDI study has demonstrated that a polyglycol-based skin cleanser or corn oil may be more effective than soap and water.
Ingestion:	DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Provided the patient is conscious, wash out mouth with water. Get medical attention if symptoms appear.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention immediately. Treatment is symptomatic for primary irritation or bronchospasm. If breathing is labored, oxygen should be given by administered by qualified personnel.
Notes to Physician:	Symptomatic and supportive therapy as needed. Following severe exposure, medical follow-up should be monitored for at least 48 hours.

SECTION 5: FIRE-FIGHTING MEASURES

Flash Point:	Closed cup: >230°F (110°C) (Setaflash).
Products of Combustion:	Containers may burst under intense heat. Due to reaction with water, a hazardous build-up of pressure could result if contaminated containers are resealed.
Extinguishing Media	Carbon dioxide, dry chemical, or appropriate foam. If water is used, very large quantities are required. Reaction between water and hot icosyanate may be vigorous. Contain run-off water with temporary barriers
Suitable:	Use an extinguishing agent suitable for the surrounding fire.
Not Suitable:	None known.
Special Exposure Hazards:	No specific hazard.
Special Protective Equipment for Fire-fighters:	Use self-contained breathing apparatus and full protective clothing (Bunker Gear).
Unusual Fire and Explosion Hazards:	Due to reaction with water producing CO_2-gas, a hazardous build-up pressure could result if contaminated containers are resealed. Containers may burst if overheated.

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:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
Methods for Cleaning Up:	• Clean up should only be performed by trained personnel. People dealing with major spillages should wear full protective clothing including full air supplied respirator. Evacuate the area • Prevent further leakage, spillage, or entry into drains. Contain and absorb large spillages onto an inert, non-flammable 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. • Neutralize small spillages with decontaminant. Remove and dispose of residues. Notify applicable government authorities if release is reportable.
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 60-100°F (16-38°C). Handling and storage should be in accordance with Local, State/Provincial or Federal regulations.
Handling:	Before opening this package, read and follow warning labels on all components. 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. (See SECTION 8—Exposure Control/Personal Protection for details.) Keep stocks of decontaminate readily available.
Storage:	Keep containers properly sealed and when stored indoors, in a dry and well-ventilated area. Keep contents away from moisture. Due to reaction with water, producing CO_2 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.
Other Precautions:	Keep container closed when not in use. Transfer only to approved containers with complete and

appropriate labeling. Keep out of the reach of children.

Decontamination Solution: Keep stocks of decontaminate readily available. (See SECTION 6—Accidental Release Measures for details).

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. 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.

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 general guidance on engineering control measures refer to the ACGIH current edition of 'Industrial Ventilation, a manual of Recommended Practice.' Eyewash fountain and safety shower should be accessible; impervious protective clothing.

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

Hands Protection: 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.

Skin Protection: The following protective materials are recommended:
GLOVES—neoprene, nitrile rubber, and butyl rubber. Thin latex disposable gloves should be avoided for repeated or long-term use. Use barrier cream on exposed skin.
PROTECTIVE CLOTHING should be selected and used in accordance 'Guidelines for the Selection of Chemical Protective clothing published by ACGIH.

Respiratory Protection: When the 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 C.F.R. 1910.134).

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.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

General Information

Physical State:	Liquid.
Color:	Clear yellow.
Odor:	Slight odor.
Odor Threshold:	Not available.

Important Health, Safety and Environmental Information

Boiling Point:	Not applicable.
Special Gravity:	Approx. 1.1439 (At 25°C)
Melting/freezing:	Not available.
Solubility (water):	Reacts with water
Solubility (other):	Soluble in most organic solvents
Flash Point:	Closed cup: >110°C (230°F).
Vapor Pressure:	Approx. 4 x 10^{-6}
Vapor Density (AIR=1):	8.5

Other Information

Volatile Organic Compounds (VOC):0 grams/liter

SECTION 10: STABILITY AND REACTIVITY

Stability	Stable at room temperature.
Incompatibility with Various Substances:	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 accelerated at higher temperatures.
Hazardous Decomposition or by-Products:	Highly unlikely under normal industrial use.
Hazardous Polymerization:	Polymerization may occur at elevated temperatures in the presence of alkalis, tertiary amines and metal compounds.
Conditions to avoid	Avoid high temperatures. Avoid freezing.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicity to Animals	Test	Result	Route	Species
Polymeric MDI	LD50	>5000 mg/kg	Oral	Rat
	LD50	>5000 mg/kg	Dermal	Rabbit
	LD50	490 mg/m^3 (4 hour/hours)	Inhalation	Rat
	LC50	>1000 mg/l		Zebra Fish
	EC50	>1000 mg/l		Daphia Magna
	EC50	>100 mg/l		E. Coli

Acute Toxicity

Ingestion: Ingestion may cause irritation of the gastrointestinal tract. Based on the acute oral LD50, this

	product is considered practically non-toxic by ingestion. DO NOT induce vomiting. Provided the patient it 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 are of exposure; keep warm and at rest. Obtain medical attention. Treatment is symptomatic for primary irritation or difficulty breating. If breathing is labored, oxygen should be administered by qualified personnel. Apply artificial respiration if breating has ceased or signs of failing.
Eyes:	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:	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.
Notes to Physicians	Symptomatic treatment and supportive therapy as needed. Following severe exposure medical follow up should be monitored for at least 48 hours.

SECTION 12: ECOLOGICAL INFORMATION

NO DATA AVAILABLE

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method:

- 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 50 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

OSHA Classification: This product is classified as hazardous material under the criteria outlined in the OSHA Hazard Communication Standard (HCS) (29 CFR 1919.1200).

TSCA REgulation: All ingredients are on the TSCA Chemical Substance Inventory

CERCLA:
- 4,4' – Methylene Diphenyl Diixocynate (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)

SECTION 15: REGULATORY INFORMATION

United States

DOT Classication: Not Regulated

DOT Proper shipping name: Diphenylmethane Diisocyanate

OSHA Classification: This product is classified as hazardous material under the criteria outlined in the OSHA Hazard Communication Standard (HCS) (29 SFR 1919.1200.)

Other Regulation/Legislation which apply to this product: Massachusetts Right-To-Know, Pennsylvania Right-To-Know, New Jersey Right-To-Know, CERCLA

Product Name	CAS Number	Concentration

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.

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

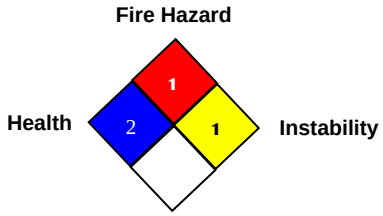
CERCLA:
- 4,4' – Methylene Diphenyl Diixocynate (CAS 101-68-8) has a 5,000 lb. RQ.
- Any spill or release above the RQ must be reported to the National Response Center (800-424-8802)
- **This product does not contain nor is it manufactured with ozone depleting substances**

SECTION 16: OTHER INFORMATION

Label requirements: Causes damage to the following organs: Lungs, Respiratory Tract, Skin, and 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.) **NATIONAL FIRE PROTECTION ASSOCIATION (U.S.A.)**

Health	**2**
Fire Hazard	**1**
Reactivity	**1**



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.