



SECTION 1: IDENTIFICATION

PRODUCT NAME **POLYSHIELD HI-E™**
 CAS NUMBER 9046-10-0
 PRODUCT USE Polyurea Coating
 MANUFACTURER Specialty Products, Inc. (SPI)
 ADDRESS 2410 104th Street Ct S Suite D, Lakewood, WA 98499
 PHONE 253-588-7101 (800) 627-0773
 FAX 253-588-7196

EMERGENCY CONTACT: FOR SPILLS, LEAKS, FIRE or EXPOSURE CALL **CHEMTREC**
 TOLL FREE **800-424-9300**
 INTERNATIONAL +1-703-527-3887
 FAX 913-321-1490

SECTION 2: HAZARDS IDENTIFICATION

GHS CLASSIFICATION:

GHS Pictogram	NEW GHS SCALE								
	<table border="1"> <tr><td>1</td><td>Extreme</td></tr> <tr><td>2</td><td>Serious</td></tr> <tr><td>3</td><td>Moderate</td></tr> <tr><td>4</td><td>Slight</td></tr> </table> <p>Health Flammability Reactivity Specialty Information</p>	1	Extreme	2	Serious	3	Moderate	4	Slight
1	Extreme								
2	Serious								
3	Moderate								
4	Slight								
WARNING	Personal Protective Equipment 								

EMERGENCY OVERVIEW

HAZARD STATEMENTS

H301 Toxic if swallowed
 H335 May cause respiratory irritation
 H314 Causes severe skin burns and eye damage

PRECAUTIONARY STATEMENTS

P233 Keep container tightly closed
 P260 Do not breath dust/fume/gas/mist/vapours/spray
 P264 Wash skin thoroughly after handling
 P270 Do not eat drink or smoke when using this product
 P271 product
 P280 Use only outdoors or in a well-ventilated area
 Wear protective gloves/protective clothing/eye protection/face protection

Appearance, Color & Odor:

Liquid, Colorless to Light Yellow, & Ammoniacal.

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

READ THE ENTIRE SDS FOR MORE THOROUGH EVALUATION OF THE HAZARDS



SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

COMMON NAME	CAS NUMBER	% WEIGHT
POLYOXYPROPYLENEDIAMINE	9046-10-0	60 – 90
*PROPRIETARY	N/A	10 – 40
*PROPRIETARY	N/A	2 - 20

*The specific chemical identity and exact percentage (concentration) is withheld as a trade secret per applicable regulations and statutes.

SECTION 4: FIRST AID MEASURES

- EYE:** **H318** Causes serious eye damage. Wear protective eye and face protection. **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
- SKIN:** **H314** Causes severe skin burns. Wash skin thoroughly after handling. Wear protective gloves and protective clothing. **IF ON SKIN (or hair):** Remove/Take off immediately all contaminated clothing. Rinse SKIN (or hair) with water/shower.
- INHALATION:** **H335** May cause respiratory irritation. Avoid breathing dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. **IF INHALED:** Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- INGESTION:** **H301** Do not eat drink or smoke when using this product. **IF SWALLOWED:** Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.
- NOTES TO PHYSICIAN:** Symptomatic and supportive therapy as needed. Following severe exposure, medical follow-up should be monitored for 48 hours.

SECTION 5: FIRE FIGHTING MEASURES

- FLASH POINT:** Closed cup: 185°C (365°F)
- HAZARDOUS THERMAL DECOMPOSITION PRODUCTS:** May produce toxic fumes of Carbon Dioxide, Carbon Monoxide, and/or Nitrogen Oxides when near heat source/flare.
- EXTINGUISHING MEDIA:**
Suitable: Use an extinguishing agent suitable for the surrounding fire
Not Suitable: None known
- SPECIAL EXPOSURE HAZARDS:** Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS:** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.



SECTION 6: ACCIDENTAL RELEASE MEASURES

- PERSONAL PRECAUTIONS:** Wear appropriate personal protective equipment recommended in SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION of this SDS. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapour or mist. Provide adequate ventilation.
- ENVIRONMENTAL PRECAUTIONS:** This material may contaminate the environment without proper control and response to spills. Ensure spilled material does not come in contact with soil, waterways, drains, sewers, or other runoff that could further disperse the material.
- METHODS FOR CONTAINMENT:** Use diking or capping to control migration. Contain and collect spillage with non-combustible absorbent materials (e.g., sand, earth, vermiculite, or diatomaceous earth) and place in container for disposal according to local, state, and/or federal regulations.
- METHODS FOR CLEANING UP:** Only proceed with clean up by taking the appropriate personal protection measures required and ensure surrounding area does not contain further hazards that could worsen the spill, cause migration, or cause further harm (i.e. eliminate any ignition sources). Move any non-contaminated, non-leaking containers from the spill zone if it can be done safely. Dike, dam, or further restrict and stop active leaks without posing further damage or harm to individuals, the environment, and/or structures. Contain and collect spillage. See SECTION 13: DISPOSAL CONSIDERATIONS for disposal information, and SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION for recommended (PPE) Personal Protective Equipment.

SECTION 7: HANDLING & STORAGE

- GENERAL:** Ideal storage temperature is 60°F – 90°F (15°C - 32°C). Shelf life is 6 months from date of manufacture. Handling and storage should be in accordance with local, state/provincial, or federal regulations.
- HANDLING:** Put on appropriate personal protective equipment (see SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION). Eating, drinking, and smoking shall be prohibited in areas where this material is handled, stored, and processed. Workers shall wash hands and face before eating, drinking, and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not get in eyes, on skin, or on clothing. Do not breathe vapour or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is adequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.



STORAGE: Store in accordance with local, state, and federal regulations. Store in original container protected from direct sunlight in a dry, cool, and well-ventilated area, away from incompatible materials (see SECTION 10: STABILITY & REACTIVITY), 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.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

RECOMMENDED MONITORING PROCEDURES: As of the latest revision of this document, no known exposure limits exist for this product. The absence of current exposure data does not relieve an employer, user, or other to determine the specific hazards and appropriate exposure protection measures in the application and use of this product. Personal, workplace, atmospheric, and/or biological monitoring may be required to determine the effectiveness of engineering, administrative, and/or other best practice control measures. These monitoring results determine the need for and type of respiratory protective equipment, if any. Refer to the appropriate local, state, and federal regulations and statutes for the most current information and for guidance in the determination of hazardous conditions and the correlating personal protective equipment.

ENGINEERING CONTROLS: Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour, or mist, use process enclosures, local exhaust ventilation, and other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

HYGIENE MEASURES: Wash hands, forearms, and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory and at the end of the working period. Appropriate engineering, administrative, and other best practice decontamination control measures must be used to isolate contaminants on clothing and to prevent unintended migration of contaminants. Handle clothing and other potentially contaminated material appropriately and in compliance with local, state, and federal regulations in the process of removing, washing/cleaning, and reuse of these potentially contaminated materials. Ensure compliant use and location of eyewash stations and safety showers.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

EYE PROTECTION: 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. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required.

SKIN PROTECTION: Personal protective equipment for the body should be selected based on the task being performed, the risks involved, and should be approved by an industrial hygiene specialist before handling this product.

HANDS PROTECTION: Chemical resistant gloves complying with applicable health and safety standards



shall be worn when handling this product. Appropriate hazard assessments in conjunction with an evaluation of the protection factors of chemical resistant gloves shall be performed to ensure the protective properties remain intact. It is noted that the time to breakdown of protection factors for different glove manufacturers varies. In the case of mixtures, the protection factors of chemical resistant gloves may be impacted and deteriorate at unpredictable rates without understanding the impact of the substance and the specific protection factors of the chemical resistant gloves.

RESPIRATORY PROTECTION:

Ensure adequate ventilation. 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.

ENVIRONMENTAL EXPOSURE CONTROLS:

Industrial air monitoring may be required to determine any potential environmental hazards to the atmosphere. This monitoring may result in the use of engineering and administrative controls such as filtering and scrubbing systems to mitigate or eliminate potential contaminants.

SECTION 9: PHYSICAL & CHEMICAL PROPERTIES

PHYSICAL STATE:	Liquid	FLASH POINT:	185°C (365°F)
COLOR:	Colorless to Light Yellow	AUTO-IGNITION TEMP:	Not available
ODOR:	Ammonia	DECOMPOSITION TEMPERATURE:	Not available
ODOR THRESHOLD:	Not available	EXPLOSIVE LIMITS:	Not available
pH:	10.5	FLAMMABILITY:	Not available
WATER SOLUBILITY:	1.00 g/cc	BOILING POINT:	Not available
PARTITION COEFFICIENT:	Not available	BOILING RANGE:	Not available
SPECIFIC GRAVITY:	1.004 g/cc	MELTING/FREEZING POINT:	Not available
VISCOSITY:	314 mPas	VAPOR PRESSURE:	Not available
EVAPORATION RATE: (butylacetate = 1)	Not available	VAPOR DENSITY:	Not available
VOC:	<1% (ASTM D2369)	RELATIVE DENSITY:	Not available

SECTION 10: STABILITY & REACTIVITY

STABILITY:	This product is stable.
INCOMPATIBILITY:	No specific data.
HAZARDOUS REACTION:	Under normal conditions of storage and use, hazardous reactions should not occur.
HAZARDOUS POLYMERIZATION:	Under normal conditions of storage and use, hazardous polymerization should not occur.
CONDITIONS TO AVOID:	No specific data.
HAZARDOUS DECOMPOSITION:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.



SECTION 11: TOXICOLOGY INFORMATION

ACUTE HEALTH EFFECTS:

EYE CONTACT:	Corrosive to eyes. Causes burns.
SKIN CONTACT:	Corrosive to skin. Mild skin irritation
INHALATION:	Irritating to respiratory system.
INGESTION/ASPIRATION:	Toxic if swallowed. May cause burns to mouth, throat, and stomach.

ACUTE TOXICITY:

PRODUCT NAME	RESULT	SPECIES	DOSE	EXPOSURE
Polyoxypropylenediamine	LD50 Dermal	Rabbit	2090 mg/kg	None
	LD50 Oral	Rat	480 mg/kg	None

POTENTIAL CHRONIC EFFECTS:

Chronic effects:	No known significant effects or critical hazards
Target organs:	No known significant effects or critical hazards
Carcinogenicity:	As of this publication, this material is not listed on the National Toxicology Program,(NTP) Report on Carcinogens.
Mutagenicity	No known significant effects or critical hazards
Teratogenicity:	No known significant effects or critical hazards
Fertility effects:	No known significant effects or critical hazards
Developmental effects:	No known significant effects or critical hazards

MEDICAL CONDITIONS AGGRAVATED BY OVER-EXPOSURE: None known.

SECTION 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL EFFECTS: Immediately harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Not readily biodegradable.

AQUATIC ECOTOXICITY

PRODUCT NAME	TEST	RESULT	SPECIES	EXPOSURE
Polyoxypropylenediamine	None	Acute EC50 15 mg/L	Daphnia	48 hours
	None	Acute IC50 135 mg/L	Algae	72 hours
	None	Acute LC50 > 100 mg/L	Fish	96 hours

BIODEGRADABILITY

PRODUCT NAME	TEST	RESULT	SPECIES	EXPOSURE
Polyoxypropylenediamine	None	Persistent	None	None

OTHER ECOLOGICAL INFORMATION

Biological Oxygen Demand: Not Determined
 (BOD 5 Day)

Chemical Oxygen Demand
 (COD) Not Determined

PRODUCT NAME	AQUATIC HALF-LIFE	PHOTOLYSIS	BIODEGRADABILITY
Polyoxypropylenediamine	None	None	None

OTHER ADVERSE EFFECTS: Not known significant effects or critical hazards.



SECTION 13: DISPOSAL CONSIDERATION

WASTE DISPOSAL: By-product wastes or process waste generation should be eliminated and/or minimized when possible. Do not dispose of any contaminants into sanitary sewer systems, storm drains, Publicly Owned Treatment Works (POTW), or any other municipal waste water treatment facility without written approval and agreements for processing wastes with such enterprises. Dispose of raw or unused materials, wastes, and/or by-products in accordance with all applicable local, state, and federal laws. Employ the expertise and knowledge of qualified personnel or contractors in disposal of any and all variants of this product. Ensure material containers are cleaned to the applicable standards before recycling, disposing, or reusing containers. Take special precautions to avoid any cross contamination and potential unknown effects from mixing with other substances. Refer to Section 8 of this document for personal protection requirements. Disposal to the environment or in violation of environmental protection laws and statutes must be prevented.

Disposal should be in accordance with applicable regional, national, and local laws and regulations.

SECTION 14: TRANSPORT INFORMATION

PROPER SHIPPING NAME

- DOT: Amines, liquid, corrosive, n.o.s. (contains: Polyoxypropylenediamine)
- TDG: Amines, liquid, corrosive, n.o.s. (contains: Polyoxypropylenediamine)
- IMDG: Amines, liquid, corrosive, n.o.s. (contains: Polyoxypropylenediamine)
- IATA: Amines, liquid, corrosive, n.o.s. (contains: Polyoxypropylenediamine)

This product could potentially contaminate aquatic and terrestrial environments if not handled in accordance with all precautions, regulations, and laws. Users, transporters, and all other applicable entities must review, follow, and apply any and all necessary precautions and procedures to eliminate and/or minimize potential hazards or risks to aquatic or terrestrial environments.

REGULATORY INFORMATION	UN NUMBER	CLASSES	PG*	LABEL	ADDITIONAL INFORMATION
DOT Classification	UN2735	8	III		None
TDG Classification	UN2735	8	III		None
IMDG Classification	UN2735	8	III		<u>Emergency schedules (EMS)</u> F-A, S-B
IATA-DGR Class	UN2735	8	III		<u>Passenger and Cargo Aircraft</u> Quantity limitation: 5 L Packaging instructions: 852 <u>Cargo Aircraft Only</u> Quantity limitation: 60 L Packaging instructions: 856

*PG: Packaging group



SECTION 15: REGULATORY INFORMATION

U.S. Federal Regulations

HCS Classification: Toxic material
 Corrosive material

U.S. Federal regulations:

TSCA 8(b)2 inventory United States Inventory (TSCA 8b): All components are listed or exempted.

TSCA 5(a) 2 final significant new use rule (SNUR): No ingredients listed.

TSCA 5(e) substance consent order: No ingredients listed.

TSCA 12(b) export notification: No ingredients listed.

SARA 311/312: Immediate (acute) health hazard

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) No ingredients listed.

Clean Air Act – Ozone Depleting Substances (ODS) This product does not contain nor is it manufactured with ozone depleting substances.

SARA 313: No ingredients listed.

CERCLA: Hazardous substances: No ingredients listed.

STATE REGULATIONS:

PENNSYLVANIA – RTK: No ingredients listed.

California Prop 65: This product contains no listed substances known to the State of California to cause cancer, birth defects, or other reproductive harm, at levels which would require a warning under the statute.

Canada

WHMIS (Canada): Class D-1B: Material causing immediate and serious toxic effects (Toxic).
 Class E: Corrosive material

CEPA DSL: All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

INTERNATIONAL LISTS:

Australia inventory (AICS):	All components are listed or exempted.
China inventory (IECSC):	All components are listed or exempted.
Japan inventory:	All components are listed or exempted.
Korea inventory:	All components are listed or exempted.
New Zealand inventory of Chemicals (NZIoC):	All components are listed or exempted.
Philippines inventory (PICCS):	All components are listed or exempted.

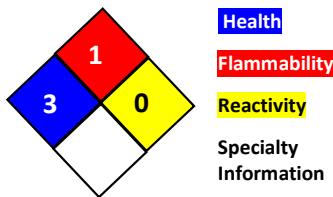


SECTION 16: OTHER INFORMATION

4	Extreme
3	Serious
2	Moderate
1	Slight
0	No Hazard



National Fire Protection Association (NFPA)



Hazardous Material Information System (HMIS)

Health	3
Flammability	1
Reactivity	0
PPE	

Note: The customer is responsible for determining the PPE code for this material. At the time of publishing, the NFPA/HMIS and the New GHS scale had opposite scales of severity. Check the most recent publications for current information.

Date of Issue: 12/9/2013
Date of previous issue: 03/20/09
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 SDS supersedes ALL previous SDS version.