SEAMLESS SOLUTIONS FOR OVER 40 YEARS

SAFETY DATA SHEET

POLYSHIELD HT™ 100F "A" Component
Revised Date: 6/29/2016
Version: 8
SDS-039

SECTION 1: IDENTIFICATION

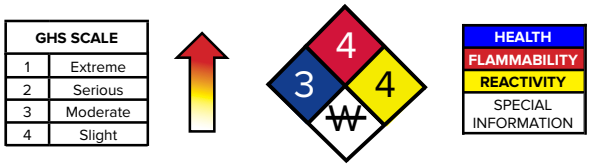
PRODUCT NAME	**POLYSHIELD HT™ 100F "A" Component**
CAS NUMBER	Not available
PRODUCT USE	Polyurea Coating
MANUFACTURER	Specialty Products, Inc. (SPI)
ADDRESS	2410 104th Street Ct S Suite D, Lakewood, WA 98499
PHONE	253-588-7101 (800) 627-0773
FAX	253-588-7196
EMERGENCY CONTACT	FOR SPILLS, LEAKS, FIRE, 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



DANGER

Personal Protective Equipment

EMERGENCY OVERVIEW

HAZARD STATEMENTS		PRECAUTIONARY STATEMENTS	
H332	Harmful if inhaled.	P264	Wash hands thoroughly after handling.
H334	May cause allergy or asthma symptoms or breathing difficulties.	P280	Wear protective gloves/protective clothing/eye protection/face protection.
H320	Causes eye irritation.	P261	Avoid breathing dust/fumes/gas/mist/vapors /spray.
H315	Causes skin irritation.	P271	Use only out doors or in a well-ventilated area.
H317	May cause an allergic skin reaction.	P270	Do not eat, drink, or smoke when using this product.
H303	May be harmful if swallowed.	P285	In case of inadequate ventilation wear respiratory protection.

APPEARANCE, COLOR, ODOR: Liquid, clear yellow, slightly musty.

USA: This material is considered hazardous to health 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

CHEMICAL NAME	CAS NUMBER	% WEIGHT
Polyether polyol	25322-69-4	30-60
Diphenylmethane 4, 4'-diisocyanate	101-68-8	10-30
Propylene carbonate	108-32-7	1-10
Monofunctional isocyanate	4083-64-1	<1
Metal carboxylates	Not available	<1

SECTION 4: FIRST AID MEASURES

EYE:	**H320**	Causes eye irritation. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do, continue rinsing. IF eye irritation persists: Get medical advice/attention.
SKIN:	**H315/317**	Causes skin irritation and may cause an allergic skin reaction. IF ON SKIN: wash with plenty of soap and water. IF SKIN irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before use.
INHALATION:	**H332/334**	Harmful if inhaled and may cause allergy or asthma symptoms or breathing difficulties if inhaled. IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
INGESTION:	**H303**	May be harmful if swallowed. IF SWALLOWED: Rinse mouth. Do not induce vomiting. Call a POISON CENTER or doctor/physician IF you feel unwell.
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:	Not available.
HAZARDS WHEN ON FIRE OR NEAR FLAME:	May produce toxic fumes of carbon dioxide, carbon monoxide, hydrocarbons, hydrogen cyanide, and/or nitrogen oxides when near heat source/flame. When in a closed container, pressure will increase which may lead to a rupture of the container.
SUITABLE EXTINGUISHING MEDIA:	Use dry chemical or carbon dioxide.
UNSUITABLE EXTINGUISHING MEDIA:	Direct water spray.
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. If in a fire or heated, a pressure increase will occur and the container may rupture.
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. PVC boots, gloves, safety helmet, and protective clothing should be worn.

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES:	For major spills call **CHEMTREC**: Toll free **1-800-424-9300** for international call **1-703-527-3887**.
PERSONAL PRECAUTIONS:	Wear appropriate personal protective equipment recommended in SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION of this SDS. Immediately contact emergency personnel. Evacuate the area. Keep upwind avoiding 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.
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, waterway, drains, sewers, or other runoff that would further disperse the material. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil, or air). Sources of ignition should be kept clear.
METHODS FOR CONTAINMENT:	Use diking or capping to control migration. Contain and absorb large spillages with a non-flammable absorbent carrier (such as vermiculite, earth, or sand). DO NOT USE combustible materials such as sawdust. Shovel into open-top drums or plastic bags for further decontamination, if necessary. Remove and properly dispose of residues. Dispose of via a licensed waste disposal contractor (See SECTION 13: DISPOSAL CONSIDERATIONS) Notify applicable government authorities if release is reportable.

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 Personal Protective Equipment (PPE). Obey all local, state, and federal regulations during clean up.

SECTION 7: HANDLING & STORAGE

GENERAL:	Ideal storage temperature is 60-90°F (15-32°C). Handling and storage shall be in accordance with local, state/provincial, or federal regulations.
HANDLING:	Before opening this package, read and follow warning labels on all components. Avoid contact with the product or reaction mixture. Put on appropriate personal protective equipment. Use only with adequate ventilation to ensure that the occupational exposure limit is not exceeded, use respirator when ventilation is inadequate. Avoid breathing aerosols, mists, and vapors. (See SECTION 8: EXPOSURE CONTROL/ PERSONAL PROTECTION for details). Do not ingest. 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. Persons with a history of skin sensitization problems, asthma, allergies, or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Do not get in eyes, on skin, or clothing. 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 containers.
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 and stored after purging the container with argon or nitrogen gas.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS:

COMPONENT NAME	CAS NUMBER	EXPOSURE LIMITS
Polyether polyol	25322-69-4	Not available
Diphenylmethane 4,4'-diisocyanate	101-68-8	**ACGIH TLV (United States, 3/2012)** TWA: 0.005 ppm 8 hour(s) **OSHA PEL (United States, 6/2010)** CEIL: 0.02 ppm CEIL: 0.2 mg/m^3 **NIOSH REL (United States, 12/2001)** CEIL: 0.2 mg/m^3 10 minute(s) CEIL: 0.02 ppm 10 minute(s) TWA: 0.05 mg/m^3 10 hour(s) TWA: 0.005 ppm 10 hour(s)
Propylene carbonate	108-32-7	Not available
Monofunctional isocyanate	4083-64-1	TWA: 0.02 mg/m^3 STEL: 0.07 mg/m^3
Metal carboxylates	Not available	Not available

ENGINEERING CONTROLS:	Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor, 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 with plenty of soap and water after handling chemical products, before eating, smoking, and using the restroom and at the end of the working period. Appropriate engineering, administrative, and other best practice decontamination control measures must be used to isolate contaminates 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 station 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.
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. Protective gloves are those made from butyl rubber, nitrile rubber, or polyvinyl alcohol. 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. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
ENVIRONMENTAL EXPOSURE CONTROLS:	Dispose of raw and spent materials and wastes in compliance with all local, state, and federal regulations to prevent potential environmental contamination. 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:**	Not available
COLOR:	Clear yellow	**AUTO-IGNITION TEMPERATURE:**	Not available
ODOR:	Slightly musty	**DECOMPOSITION TEMPERATURE:**	Not available
ODOR THRESHOLD:	Not available	**EXPLOSIVE LIMITS:**	Not explosive
pH:	Not applicable	**FLAMMABILITY:**	Not available
WATER SOLUBILITY:	Not available	**BOILING POINT:**	Not available
PARTITION COEFFICIENT:	Not available	**BOILING RANGE:**	Not available
SPECIFIC GRAVITY:	1.12±0.005 g/cc @ 77°F (25°C)	**MELTING/FREEZING POINT:**	Not available
VISCOSITY:	400±25 cps @ 77°F (25°C)	**VAPOR PRESSURE:**	Not available
EVAPORATION RATE:	Not available	**VAPOR DENSITY:**	Not available
VOC:	Not available	**RELATIVE DENSITY:**	9.4±0.05 lbs/gal

SECTION 10: STABILITY & REACTIVITY

STABILITY:	Stable when handled and stored at temperatures 60-90°F (15-32°C). Reaction with water (moisture) produces CO_2 gas. Exothermic reaction with materials containing active hydrogen groups. The reaction becomes progressively more vigorous and can be violent at higher temperatures if the miscibility of the reaction partners is good or is supported by stirring or by the presences of solvents. MDI is insoluble with and heavier than water and sinks to the bottom but reacts slowly at the interface. A solid water-insoluble layer of polyurea is formed at the interface.
INCOMPATIBILITY:	Incompatible with water, alcohols, amines, bases, and acids.
HAZARDOUS REACTION:	Exothermic reaction will occur when combined with sister component. Under normal conditions of storage and use, hazardous reactions will not occur.
HAZARDOUS POLYMERIZATION:	Polymerization may occur at elevated temperatures in the presence of alkalis, tertiary amines and metal compounds. Under normal conditions of storage and use, hazardous polymerization should not occur.
CONDITIONS TO AVOID:	Avoid moisture contamination and high temperatures.

SECTION 11: TOXICOLOGY INFORMATION

ACUTE HEALTH EFFECTS:	
EYE CONTACT:	Causes eye irritation.
SKIN CONTACT:	Causes skin irritation and may cause an allergic skin reaction.
INHALATION:	Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
INGESTION:	May be harmful if swallowed.

ACUTE TOXICITY:

COMPONENT NAME	CAS NUMBER	LD_{50} Oral (mg/kg)	LD_{50} Dermal (mg/kg)	LC_{50} Inhalation (mg/m^3/4hrs)
Polyether polyol	25322-69-4	>2,000 (rat)	>2,000 (rabbit)	>80,000 (rat)
Diphenylmethane 4,4'-diisocyanate	101-68-8	>10,000 (rat)	>9,400 (rabbit)	490 (rat)
Propylene carbonate	108-32-7	> 5,000 (rat)	>2,000 (rabbit)	Not available
Monofunctional isocyanate	4083-64-1	>2,600 (rat)	Not available	2,560 (rat)
Metal carboxylates	Not available	Not available	Not available	Not available

POTENTIAL CHRONIC EFFECTS:	
CHRONIC EFFECTS:	Contains material that can cause target organ damage. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
TARGET ORGANS:	Contains material which causes damage to the upper respiratory tract.
CARCINOGENICITY:	As of this publication, this material is not listed on the National Toxic Program (NTP) Report of Carcinogens. Please refer to the most recent information with NTP. The material is classified on the International Agency for Research on Cancer (IARC) Monographs as Group 3. Exposure to levels of MDI, significantly above the threshold limit value (0.005 ppm), was shown to be related to the occurrence of lung tumors in a study using rats.
MUTAGENICITY:	No known significant effects or critical hazards.
TERATOGENICITY:	No birth defects were seen in two independent animal (rat) studies. Fetotoxicity was observed at doses that were extremely toxic to the mother. The doses used in the study were maximal, reparable concentrations, which are well in excess of defined occupational limits.
FERTILITY EFFECTS:	No known significant effects or critical hazards.
DEVELOPMENTAL EFFECTS:	No known significant effects or critical hazards.
MEDICAL CONDITIONS AGGRAVATED BY OVER-EXPOSURE:	Existing respiratory/pulmonary and skin conditions may be aggravated by overexposure.

SECTION 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL EFFECTS:	Based on a review of the individual components, this product has low ecotoxicity on aquatic organisms. When in contact with water an inert non-biodegradable solid will be produced. There is no evidence of bio-accumulation occurring.

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: EXPOSURE CONTROL/ PERSONAL PROTECTION of this document for personal protection requirements. Disposal to the environment or in violation of environmental protection laws and statutes must be prevented.

SECTION 14: TRANSPORT INFORMATION

PROPER SHIPPING NAME:	
DOT:	Other regulated substance, liquid, n.o.s. (contains: Diphenylmethane 4,4'- diisocyanate) * Single containers less than 5,000 lbs. are not regulated.
TDG:	Not regulated.
IMDG:	Not regulated.
IATA:	Not regulated.

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	NA3082	9	III		**Reportable quantity 5,000 lbs. (2,268 kg)** Single containers less than 5,000 lbs. are not regulated.

*PG: Packaging group

SECTION 15: REGULATORY INFORMATION

U.S. Federal Regulations			
This material is considered hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200)			
HCS Classification:	Toxic Irritant Sensitizer		
TSCA 8b Inventory:	All components are listed on the TSCA inventory or are exempt.		
TSCA 5a (2):	No components listed.		
TSCA 5e:	No components listed.		
TSCA 12b:	No components listed.		
Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs):	**COMPONENT**	**CAS NUMBER**	**CONCENTRATION**
	Diphenylmethane 4,4'-diisocyanate	101-68-8	10-30%
Clean Air Act - Ozone Depleting Substances (ODS):	This product does not contain nor is it manufactured with ozone depleting substances.		
SARA 313 Form R - Reporting Requirements:	**COMPONENT**	**CAS NUMBER**	**CONCENTRATION**
	Diphenylmethane 4,4'-diisocyanate	101-68-8	10-30%
SARA 311/312 hazard identification:	Not classified.		

CERCLA Hazardous substances:

Component	Concentration	Section 302 (TPQ)	Section 313	Section 304 CERCLA RQ	CERCLA reportable quantity	Product reportable quantity
Diphenylmethane 4,4'-diisocyanate	10-30%	Not listed	Listed	Not listed	5,000 lbs	18,200 lbs

STATE REGULATIONS:			
PENNSYLVANIA/NEW JERSEY/MASSACHUSETTS - RTK:	**COMPONENT**	**CAS NUMBER**	**CONCENTRATION**
	Diphenylmethane 4,4'-diisocyanate	101-68-8	10-30%
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 Class D-2A: Material causing other toxic effects (very toxic).		
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):	Not determined.		
China inventory (IECSC):	Not determined.		
Japan inventory:	Not determined.		
Korea inventory:	Not determined.		
New Zealand inventory of Chemicals (NZIoC):	Not determined.		
Phillipines inventory (PICCS):	Not determined.		

SECTION 16: OTHER INFORMATION

NFPA & HMIS	
4	Extreme
3	Serious
2	Moderate
1	Slight
0	No Hazard

National Fire Protection Association (NFPA)

HEALTH	
FLAMMABILITY	
REACTIVITY	
SPECIAL INFORMATION	

Hazardous Material Information System (HMIS)

HEALTH	2
FLAMMABILITY	1
REACTIVITY	1
SPECIAL INFORMATION	

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:	6/29/2016
Date of previous issue:	1/22/2016
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 versions.