





SECTION 1: IDENTIFICATION

PRODUCT NAME	DRAGONSHIELD-HT® ERC "B" 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														
	<table border="1"> <tr><th colspan="2">GHS SCALE</th></tr> <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>   <table border="1"> <tr><td>HEALTH</td></tr> <tr><td>FLAMMABILITY</td></tr> <tr><td>REACTIVITY</td></tr> <tr><td>SPECIAL INFORMATION</td></tr> </table>	GHS SCALE		1	Extreme	2	Serious	3	Moderate	4	Slight	HEALTH	FLAMMABILITY	REACTIVITY	SPECIAL INFORMATION
GHS SCALE															
1	Extreme														
2	Serious														
3	Moderate														
4	Slight														
HEALTH															
FLAMMABILITY															
REACTIVITY															
SPECIAL INFORMATION															
DANGER	Personal Protective Equipment 														

EMERGENCY OVERVIEW

HAZARD STATEMENTS		PRECAUTIONARY STATEMENTS	
H302	Harmful if swallowed.	P260	Do not breathe dust/fume/gas/mist vapors/spray.
H314	Causes severe skin burns and eye damage.	P264	Wash hands thoroughly after handling.
H333	May be harmful if inhaled.	P270	Do not eat, drink, or smoke when using this product.
		P271	Use only outdoors or in a well-ventilated area.
		P280	Wear protective gloves/protective clothing/eye protection/face protection.

APPEARANCE, COLOR, ODOR: Liquid, clear, amine odor.

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
Polyoxypropylenediamine	9046-10-0	50-90
Diethylmethylbenzenediamine	68479-98-1	20-40
3-Glycidyloxypropyl-trimethoxysilane	2530-83-8	1-10
Glyceryl poly (oxypropylene) triamine	64852-22-8	1-10

*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:	H314	Causes eye damage. 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. IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse SKIN with water/shower. Wash with plenty of soap and water. Wash contaminated clothing before reuse.
INHALATION:	H333	May be harmful 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:	H302	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, 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:	Dry chemical foam, carbon dioxide, foam, or water spray (mist/fog) to extinguish.
UNSUITABLE EXTINGUISHING MEDIA:	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. 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.
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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 container tightly closed and properly sealed when stored. When possible, store product indoors in a dry, well-ventilated area. Store in original container protected from direct sunlight, away from incompatible materials, and away from 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 and use appropriate containment to avoid environmental contamination.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS:	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, 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 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 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	AUTO-IGNITION TEMPERATURE:	Not available
ODOR:	Amine odor	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:	1.00±0.005 g/cc @ 77°F (25°C)	MELTING/FREEZING POINT:	Not available
VISCOSITY:	275±25 cps @ 77°F (25°C)	VAPOR PRESSURE:	Not available
EVAPORATION RATE:	Not available	VAPOR DENSITY:	Not available
VOC:	Not available	RELATIVE DENSITY:	8.4±0.05 lbs/gal

SECTION 10: STABILITY & REACTIVITY

STABILITY:	Stable when handled and stored at temperatures 60-90°F (15-32°C).
INCOMPATIBILITY:	Strong reaction with acids and oxidizing agents.
HAZARDOUS REACTION:	No specific data available.
HAZARDOUS POLYMERIZATION:	Hazardous polymerization will not occur under normal conditions of storage and use.
CONDITIONS TO AVOID:	Avoid temperatures above 100°F (38°C) and freezing temperatures. Avoid moisture contamination in containers.
HAZARDOUS DECOMPOSITION:	Combustion of product will lead to oxides of nitrogen, carbon dioxide, and carbon monoxide being produced.

SECTION 11: TOXICOLOGY INFORMATION**ACUTE HEALTH EFFECTS:**

EYE CONTACT:	Causes eye damage.
SKIN CONTACT:	Causes severe skin burns.
INHALATION:	May be harmful if inhaled.
INGESTION:	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)
Polyoxypropylenediamine	9046-10-0	480 (rat)	2,090 (rabbit)	Not available
Diethylmethylbenzenediamine	68479-98-1	738 (rat)	>2,000 (rabbit)	Not available
3-Glycidyloxypropyl-trimethoxysilane	2530-83-8	24,182 (rat)	4,248 (rabbit)	Not available
Glyceryl poly (oxypropylene) triamine	64852-22-8	2,690 (rat)	12,500(rabbit)	Not available

POTENTIAL CHRONIC EFFECTS:

CHRONIC EFFECTS:	A two year study on rats showed that diethylmethylbenzenediamine caused effects in the pancreas, liver, thyroid, and eyes. There was increase in the number of tumors in the liver and thyroid of male rats. An increase in the number of tumors in the liver and possibly mammary glands of female rats was also found.
TARGET ORGANS:	Pancreas, liver, thyroid, and eyes.
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.
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:	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 may be immediately harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment, and not readily biodegradable.
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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.
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SECTION 14: TRANSPORT INFORMATION

PROPER SHIPPING NAME					
DOT:	Amines, liquid, corrosive, n.o.s. (Polyoxypropylendiamine)				
TDG:	Amines, liquid, corrosive, n.o.s. (Polyoxypropylendiamine)				
IMDG:	Amines, liquid, corrosive, n.o.s. (Polyoxypropylendiamine)				
IATA:	Amines, liquid, corrosive, n.o.s. (Polyoxypropylendiamine)				
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	II		None
TDG Classification	UN2735	8	II		None
IMDG Classification	UN2735	8	II		Emergency schedules (EmS) F-A, S-B
IATA-DGR Class	UN2735	8	II		Passenger and Cargo Aircraft Quantity limitation: 1 L Packaging Instructions: 851 Cargo Aircraft Only Quantity limitation: 30 L Packaging Instructions: 855
*PG: Packaging group					

SECTION 15: REGULATORY INFORMATION

U.S. Federal Regulations

This material is considered hazardous to health under OSHA Hazard Communication Standard (29 CFR 1910.1200)

HCS Classification:	Toxic Irritant Corrosive		
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):	No components listed.		
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
	Diethylmethybenzenediamine	68479-98-1	20-40%
SARA 311/312 hazard identification:	Immediate (acute) health hazard. Delayed (chronic) health hazard.		
CERCLA Hazardous substances:	No components listed.		

STATE REGULATIONS:

PENNSYLVANIA/NEW JERSEY/MASSACHUSETTS - RTK:	No components 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):	WHMIS Class D-1B: Material causing immediate and serious toxic effects (toxic). WHMIS Class E: Corrosive.
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.
Phillipines inventory (PICCS):	All components are listed or exempted.

SECTION 16: OTHER INFORMATION

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



National Fire Protection Association (NFPA)



HEALTH	1
FLAMMABILITY	3
REACTIVITY	0
SPECIAL INFORMATION	

Hazardous Material Information System (HMIS)

HEALTH	3
FLAMMABILITY	1
REACTIVITY	0
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:	4/22/2016
Date of previous issue:	3/7/2016
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.