



# MATERIAL SAFETY DATA SHEET

DRAGONSHIELD-BC™ – Component "A"

Revised Date: 10/11/12

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## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

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Product Name: DRAGONSHIELD-BC™  
Component: "A"

Company: Specialty Products, Inc.  
2410 104<sup>th</sup> Street Ct S  
Ste D  
Lakewood, WA 98499

**EMERGENCY CONTACT:** For Spills, Leaks, Fire or Exposure call **CHEMTREC**  
Toll Free: 800.627.0773  
International Calls: 800.627.0773  
Fax: 253-588-7196

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## SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

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<u>Name</u>	<u>CAS#</u>	<u>% W</u>
Polyurethane		>99
Toluenediisocyanate, 2,6-	91-08-7	<0.09
Toluenediisocyanate, 2,4-	584-84-9	<0.09

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## SECTION 3: HAZARDS IDENTIFICATION

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OSHA/HCS status: This material is classified as non-hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency Overview: **WARNING**  
Keep away from heat and sources of ignition  
Contact with eyes may cause irritation  
Mild skin irritation

This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater.

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.](#)**



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### SECTION 4: FIRST AID MEASURES

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Eye Contact:	In case of contact, immediately flush eyes with running water for a minimum of 20 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:	After contact with skin, remove contaminated clothing; wash affected areas thoroughly with warm soapy water. Immediately remove contaminated clothing, and any extraneous chemical, if possible do so without delay. Contaminated clothing and shoes should be properly laundered before reusing. If irritation, redness, or a burning sensation develops and persists, obtain medical attention immediately.
Ingestion:	Prevent aspiration of vomit. Turn individuals head to the side. Get medical attention if symptoms appear.
Inhalation:	Move to fresh air. If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated.
General Advise:	Seek medical advice. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately.

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### SECTION 5: FIRE-FIGHTING MEASURES

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Flash Point:	>320°F (160°C)
Products of Combustion:	Not determined
<u>Extinguishing Media</u>	
Suitable:	Alcohol-resistant foam, carbon dioxide CO <sub>2</sub> , dry chemical, dry sand, and limestone powder.
Not Suitable:	None known.
Special Exposure Hazards:	Incomplete combustion may form carbon monoxide. Burning produces obnoxious and toxic fumes.
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.
Further Information:	Do not allow run-off from the fire fighting to enter drains or water courses.



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### SECTION 6: ACCIDENTAL RELEASE MEASURES

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Accidental Release Measures:	For major spills call <b>CHEMTREC</b> Toll Free 1.800.424.9300 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:	Contain and absorb large spillages onto an inert, non-flammable adsorbent 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. Neutralize small spillages with decontaminant. Remove and properly dispose of residues. (See SECTION 13 for disposal considerations.) Notify applicable government authorities if release is reportable. The CERCLA RQ for 4,4-MDI is 5,000 lbs (see CERCLA in SECTION 15-Regulatory Information).
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.

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### SECTION 7: HANDLING AND STORAGE

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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:	<u>Before using this product, read and follow warning labels on all components.</u> 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 <sub>2</sub> 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).



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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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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. 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:	Provide readily accessible eye wash stations and safety showers. 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.’
<u>Personal Protection:</u>	
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. The breakthrough time of the selected glove(s) must be greater than the intended use period.
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 at the end of each workshift and before eating, smoking, or using the toilet. Wash all contaminated clothing and shoes before reuse.
Other Protection:	Consult your supervisor or S.O.P. for special handling instructions.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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General Information

Physical State:	Viscous.
Color:	Clear yellow.
Odor:	Slightly musty.



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Odor Threshold: Not available.

### Important Health, Safety and Environmental Information

pH: Neutral  
Boiling Point: Not determined  
Melting/Freezing Point: Not determined  
Flash Point: Closed cup: >320°F (160°C)  
Explosive Properties: Not explosive  
Oxidizing Properties: Not determined  
Vapor Pressure: 0.07 mmHg at 69°F (21°C)  
Vapor Density (AIR=1): 8.5

### Other Information

Auto-ignition temperature: >316°C (>600°F)  
Volatile Organic Compounds (VOC): 0 grams/liter

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### SECTION 10: STABILITY AND REACTIVITY

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Stability & Reactivity: Stable at room temperature.

Incompatibility with Various Substances: Reaction with water (moisture) produces CO<sub>2</sub>-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 presence of solvents. A solid water-insoluble layer of polyurea is formed at the interface by liberating carbon dioxide gas. Reaction with water, contaminants, or excessive heat may result in sufficient pressure to burst container.

Hazardous Decomposition or by-Products: Carbon monoxide, carbon dioxide CO<sub>2</sub>, Isocyanates, Carbamates, Cyanic acids, Cyanogen, Nitrile, Toxic cyanates.

Conditions of Instability: Avoid high temperatures.

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### SECTION 11: TOXICOLOGICAL INFORMATION

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#### Acute Health Hazard

Ingestion: No data is available on the product itself.

Ingestion Components Toluenediisocyanate, 2,4-  
Inhalation: LD50: 5,800 mg/kg  
No data available on the product itself.

Eyes: Mild eye irritation

Skin: LD50: >5,000 mg/kg  
Species: Rabbit

Acute dermal irritation/corrosion: Mild skin irritation

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### SECTION 12: ECOLOGICAL INFORMATION

#### Ecotoxicity effects:

Aquatic toxicity: No data available on this product itself

Toxicity to other organisms: No data available

#### Persistence and degradability:

Mobility: No data available

Bioaccumulation: No data available on this product itself

### 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

CFR not regulated

IATA not regulated

IMDG not regulated

CTC not regulated

Further Information: Not dangerous goods

### SECTION 15: REGULATORY INFORMATION

#### United States

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

COUNTRY	REGULATORY LIST	NOTIFICATIONS
USA	TSCA	Included on inventory
EU	EINECS	Included on EINECS inventory or polymer substance, monomers included on EINECS inventory or no longer polymer
Canada	DSL	Included on inventory
Australia	AICS	Not on inventory
Japan	ENCS	Not on inventory
South Korea	ECL	Included on inventory
China	SEPA	Included on inventory



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Phillippines PICCS Included on inventory

EPA SARA Title III Secion 312 (40 CFR 370) Hazard Classification: No SARA hazards

Classification:

EPA SARA Title III Section 313 (40 CFR 372) Component(s) above 'de minimus' level None

US California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)

WARNING! This product contains a chemical known in the State of California to cause cancer

Toluenediisocyanate, 2,4-

Toluenediisocyanate, 2, 6-

WHMIS Hazard Classification: Not Rated

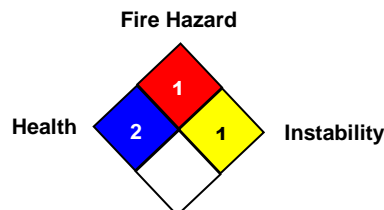
**SECTION 16: OTHER INFORMATION**

Label requirements: 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.

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

Health	2
Fire Hazard	1
Reactivity	1

**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.