MATERIAL SAFETY DATA SHEET

Section 1 – CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name: SPRAYSHIELD GREEN #2 PART A
Identification Number:
Product User/Class: Polyurethane isocyanate prepolymer with additives

For Technical or Emergency Information: (Monday ï Friday, 8:00 A.M. to 5:00P.M. C.T.)

Supplier:
SprayRoq
248 Cahaba Valley Parkway
Pelham, AL 35124
(205) 957-0020

Manufacturer:
SprayRoq
5151 Natural Bridge
St. Louis, MO 63115
(314) 664-2230

Preparer: Regulatory Department

Revision Date: 3/21/11

In the event of a chemical emergency involving a spill, leak, fire, exposure or accident during transportation, call CHEMTREC: 800-424-9300 (24 hours). Read the MSDS and label prior to use.

SECTION 2 – HAZARDOUS COMPONENTS

				--- Exposure Limits ---		
	CAS #	Weight %	SARA 313	ACGIH TWA	ACGIH STEL	OSHA PEL
Polymethylene polyphenyl isocyanate:	26447-40-5	20-70	NO	N/E	N/E	N/E
4,4ô Diphenylmethane diisocyanate (MDI)	101-68-8	20-70	YES	0.005ppm	N/E	0.02ppm
MDI Prepolymer	Trade Secret	10-60	NO	NDA	NDA	NDA

Note: The dried film of this product may become a dust nuisance when removed by sanding or grinding. OSHA recommends a PEL/TWA of 15mg/m3 for total dust and 5mg/m3 for the respirable fraction. ACGIH recommends a TLV/TWA of 10mg/m3 for total dust.

SECTION 3 – PHYSICAL DATA

ODOR:	Mild	EVAPORATION RATE:	<1 (Ether = 1)
BOILING POINT:	>350°F	VAPOR DENSITY:	>1 (Air = 1)
% VOLATILE BY WEIGHT:	0	SOLUBILITY IN WATER:	Not soluble, reacts
% VOLATILE BY VOLUME:	0	WEIGHT PER GALLON:	9.7

NE=Not Established NDA=No Data Available C = Ceiling

SECTION 4 – HEALTH INFORMATION

Emergency Overview: Harmful if inhaled. Toxic fumes are released in fire situations. Clear Liquid. Mild odor.

HMIS RATINGS:	Health 2	Flammability 1		Reactivity 1
Insignificant = 0	Slight = 1	Moderate = 2	High = 3	Extreme = 4
NFPA RATINGS:	Health 2	Flammability 1		Reactivity 1
Minimal = 0	Slight = 1	Moderate = 2	Serious = 3	Severe = 4

Potential Health Effects:

Inhalation: At room temperature, MDI vapors are minimal due to low vapor pressure. However, heating, spraying, foaming, or otherwise mechanically dispersing (drumming, venting or pumping) operations may generate vapor or aerosol concentrations sufficient to cause irritation or other adverse effects. Excessive exposure may cause irritation of the upper respiratory tract and lungs. Severe overexposure may lead to bronchitis, bronchial spasms and pulmonary edema. May cause respiratory sensitization with asthma-like symptoms in susceptible individuals. MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized. Symptoms may include coughing, dryness of throat, headache, nausea, difficult breathing and a feeling of tightness in the chest. Effects may be delayed. Impaired lung function (decreased ventilator capacity) has been associated with overexposure to isocyanates.

Skin Contact: No irritation is likely to develop following short contact periods with skin. Prolonged or repeated exposure can cause skin irritation, reddening, dermatitis, and in some individuals, sensitization. Skin contact may result in allergic skin reactions or respiratory sensitization, but is not expected to result in absorption of amounts sufficient to cause other adverse effects. May stain skin.

Eye Contact: As a liquid or dust, may cause irritation, inflammation, and/or damage to sensitive eye tissue. Symptoms include watering or discomfort of the eyes. Corneal injury is unlikely.

Ingestion: Single dose oral toxicity is considered to be extremely low. Can result in irritation and corrosive action in the mouth, stomach tissue and digestive tract.

Chronic: As a result of previous repeated overexposures or a single large dose, certain individuals develop isocyanate sensitization (chemical asthma) or tissue injury in the upper respiratory tract. Animal tests indicate skin contact alone may also lead to allergic respiratory reaction. These effects may be permanent. Any person developing asthmatic reaction or other sensitization should be removed from further exposure.

Carcinogenicity:MDI and Polymeric MDI are not listed by the NTP, IARC or regulated by OSHA as carcinogens. Lung tumors have been observed in laboratory animals exposed to aerosol droplets of MDI/Polymeric MDI (6 mg/m^3) for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects. Other chemicals in this product that are listed by the NTP, IARC or regulated by OSHA as carcinogens: None

SECTION 5 – EMERGENCY AND FIRST AID PROCEDURES

Eyes: Flush eyes with plenty of water for at least 15 minutes. Materials containing MDI may react with the moisture of the eye forming a thick material which may be difficult to wash from the eyes. Seek medical attention.

Skin: Wash off in flowing warm water or shower with soap. Remove and wash contaminated clothing and discard contaminated shoes. If redness, itching or a burning sensation develops or persists after the area is washed, consult a physician.

Ingestion: Do not induce vomiting or give liquids unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Seek medical attention.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility immediately.

NOTE TO PHYSICIAN: *EYES*: Stain for evidence of corneal injury. If cornea is burned, instill antibiotic steroid preparation frequently. Workplace vapors have produced reversible corneal epithelial edema impairing vision.

SKIN: This compound is a known skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burns. If burned, treat as a thermal burn.

INGESTION: Treat symptomatically. There is no specific antidote. Inducing vomiting is contraindicated because of the irritating nature of this compound.

INHALATION: Isocyanates are known pulmonary sensitizers. Treatment is essentially symptomatic. An individual having a skin or pulmonary sensitization reaction to this material should be removed from exposure to any isocyanate compound.

SECTION 6 – FIRE AND EXPLOSION HAZARDS

Flash Point:	>250°F, (COC)	**Flammability Classifications:**
Autoignition Temperature:	NDA	OSHA - None
Flammable Limits (STP):	NDA	DOT - None

Fire Degradation Products: Isocyanate vapor and mist, carbon dioxide, carbon monoxide, nitrogen oxides and traces of hydrogen cyanide.

Extinguishing Media: Use dry chemical, foam, carbon dioxide, or halogenated agents. If water is used, use very large quantities. The reaction between water and hot isocyanate may be vigorous. If possible, contain fire run-off water.

Protective Equipment: Wear positive-pressure self-contained breathing apparatus with full face mask and full protective clothing.

Unusual Hazards: At temperatures greater than 400°F, polymeric MDI can polymerize and decompose which will cause pressure build-up in closed containers. Explosive rupture is possible. Water contamination will produce carbon dioxide. Do not reseal contaminated containers as pressure buildup may rupture the containers. Downwind personnel must be evacuated.

SECTION 7 – REACTIVITY

Stability: Polyisocyanates are highly reactive chemicals and should be handled and stored in a way to avoid exposure to many common substances, including water and moisture. Material is stable when stored in sealed containers under normal conditions. Avoid extended exposure over 110°F (45°C).

Hazardous
Polymerization: May occur with incompatible reactants especially strong bases, water or temperatures over 320°F (160°C). Possible evolution of carbon dioxide gas from overheating or exposure to contaminants may rupture closed containers.

Reactivity: Reacts with water, acids, bases, alcohols, metal compounds. The reaction with water is very slow under 120°F (50°C), but is accelerated at higher temperatures and in the presence of alkalis, tertiary amines and metal compounds. Some reactions can be vigorous or even violent.

SECTION 8 – EMPLOYEE PROTECTION

Exposure: MDI contains reactive isocyanate groups. Use with adequate ventilation to keep airborne isocyanate level below TLV of 0.005 ppm TWA (ACGIH) and PEL 0.02 ppm ceiling (OSHA).These control limits do not apply to previously sensitized individuals or to individuals with existing respiratory disease, such as chronic bronchitis, emphysema or asthma. Respiratory protection may be needed where material is heated, sprayed or used in a confined space, or if TLV is exceeded. Never try to detect MDI vapor by odor.
Persons with known respiratory or allergic problems must not be exposed to this product.

Ventilation: MDI has a very low vapor pressure at room temperature. General/local ventilation typically control exposure levels very adequately. Uses requiring heating and/or spraying may require more aggressive engineering controls or personal protective equipment. Monitoring is required to determine engineering controls.

Respiratory Protection: When atmospheric levels exceed the occupational exposure limit, NIOSH certified air-purifying respirators equipped with an organic vapor filter can be used as long as appropriate precautions and change out schedule are in place. A supplied air, full face mask, positive pressure or continuous flow respirator or a supplied air hood is required when airborne concentrations are unknown or exceed threshold values. A positive pressure self contained breathing apparatus can be used in emergencies or other unusual situations. All equipment must be NIOSH/MSHA approved and maintained.

Eye Protection: Chemical splash goggles or safety glasses or full face mask must be used consistent with splash hazard present. If vapor exposure causes eye discomfort, use a full facepiece respirator or supplied air hood.

Protective Clothing: Wear clothing, boots and gloves impervious to MDI under conditions of use. Materials may include butyl rubber, nitrile rubber, neoprene and Saranex® coated Tyvek®.

Other Protective
Equipment: An eyewash station and safety shower or other drenching facilities must be easily accessible.

NE=Not Established NDA=No Data Available ca=Approximately <=Less than C = Ceiling

SECTION 9 – ENVIRONMENTAL PROTECTION

Spill: Evacuate spill area. With adequate ventilation and appropriate personal protective equipment, cover the area with an inert absorbent material such as clay or vermiculite and transfer to metal waste containers. Move container to a well ventilated area (outside), but do not seal the container with the isocyanate mixture. Larger quantities of liquid may be transferred directly to drums for disposal. Decontaminate or discard all clean-up equipment.

NOTE: ISOCYANATES WILL REACT WITH WATER AND GENERATE CARBON DIOXIDE. THIS COULD RESULT IN THE RUPTURE OF ANY CLOSED CONTAINERS.

Clean up: The area should then be flushed with a decontamination solution. The decontamination solution is a 5-10% mixture of sodium carbonate and 0.5% liquid detergent in water solution or a 3-8% concentrated ammonium hydroxide and 0.5% liquid detergent in water. Use 10 parts decontamination solution to 1 part spilled material. If the ammonium hydroxide solution is used, ammonia will be evolved as a vapor. Use caution to avoid exposure to high concentrations of ammonia. Allow to stand for 48 hours letting evolved carbon dioxide to escape.

Disposal: Any disposal practice must be in compliance with all federal, state and local laws and regulations. Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Waste characterization and disposal compliance are the responsibility solely of the party generating the waste or deciding to discard or dispose of the material.

Do not allow material to enter sewers, a body of water, or contact the ground. Refer to RCRA 40 CFR 261, and/or any other appropriate federal, state or local requirements for proper classification information.

Container

Disposal: Drums/containers must be thoroughly drained to process or storage vessels before removal to an appropriate area for subsequent decontamination. Drums/containers must be decontaminated in properly ventilated areas by personnel protected from the inhalation of isocyanate vapors. Spray or pour 1 to 5 gallons of decontaminating solution into the drum, making sure the walls are well rinsed. Let the drum/container soak unsealed for 48 hours. Pour out the decontaminating solution and triple rinse the empty container. Puncture or otherwise destroy the rinsed container before disposal. *Do not* heat or cut empty containers with electric or gas torch.

Call CHEMTREC (800-424-9300) for chemical emergencies or spills during transportation

SECTION 10 - STORAGE AND HANDLING

Storage: When stored between 15 and 30°C (60 and 85°F) in sealed containers, typical shelf life is 6 months or more from the date of manufacture. Consult technical data sheet for shelf life requirements affecting performance quality. Should freezing occur, the material must be thawed thoroughly and mixed until uniform. Opened containers must be handled properly to prevent moisture pickup.

Handling: Use personal protective equipment when transferring material to or from drums, totes or other containers. The reaction of polyols and isocyanates generates heat. Contact of the reacting materials with skin or eyes can cause irritiation and may be difficult to remove from the affected areas. Immediately wash affected areas with plenty of water and seek medical attention. In addition, such contact increases the risk of exposure to isocyanate vapors. Do not smoke or use naked lights, open flames, space heaters, or other ignition sources near pouring, frothing or spraying operations.

Special Emphasis for Spray Applications: Inspect the application area from the potential to expose other persons or for overspray to drift onto buildings, vehicles or other property. When spraying building exteriors, persons entering or exiting the building as well as those inside could be exposed to polyisocyanates due to wind conditions, open windows or air intakes. Do not begin application work until these potential problems have been corrected.

SECTION 11 – SHIPPING INFORMATION

DOT (Domestic Surface)
Hazard Class or Division: Not Regulated

IMO (Ocean)
Hazard Class or Division: Not regulated

IATA/ICAO (Air)
Hazard Class or Division: Not regulated

SECTION 12 – REGULATORY INFORMATION

OSHA Status: This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA Status: On TSCA inventory.

CERCLA Reportable Quantity: 4,4ô Diphenylmethane diisocyanate = 5,000 lbs

SARA Title III:

Section 302 Extremely Hazardous Substances:
None

Section 311/312 Hazard Categories:
Immediate Health Hazard, Delayed Health Hazard, Reactive Hazard

RCRA Status: It is the responsibility of the user of products to determine, at any time of disposal, whether a product meets any of the criteria for hazardous waste.

California Proposition 65: Chemical(s) in this product known to the State of California to cause cancer:
None

California Proposition 65: Chemical(s) in this product known to the State of California to cause reproductive toxicity:
None

SECTION 13 – COMMENTS

This MSDS complies with 29 CFR 1910.1200 (Hazard Communication Standard)

The information contained herein is based on the data available to us and is believed to be correct. However, we make no warranty, expressed or implied regarding the accuracy of this data or the results to be obtained from the use therof. We assume no responsibility for injury from the use of the product described herein.