



Rust Bullet®

BlackShell™

MATERIAL SAFETY DATA SHEET

Updated July 18, 2006

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Rust Bullet® BlackShell™ CAS Number: Mixture
Chemical Name & Synonyms: Modified Urethane Resin Mixture □□
Trade Names & Synonyms: Rust Bullet® BlackShell™

Company Identification: **Rust Bullet®**
300 Brinkby Avenue; Suite 200
Reno, NV 89509
775-829-5606 (For product information) 800-424-9300 or 202-483-7616 (CHEMTREC: For emergencies)

2. COMPOSITION / INFORMATION ON INGREDIENTS:

Chemical Name	Amount (optional)	CAS Number	TLV
Diisocyanate (MDI)	1-5%	26447-40-5	ACGIH: not established
MDI Based Polyisocyanate	40-65%		OSHA: not established
			ACGIH: not established
4,4'-Diphenylmethane	5-15%	101-68-8	OSHA: not established
			ACGIH: not established
Black Base Proprietary Blend	0-15%		
Aromatic Solvent Blend	10-25%	1330-20-7	434 mg/m ³
Isobutyl Acetate	10-25%	110-19-0	713mg/m ³

Non Isomer specific DAS number includes 2.2'MDI and 2.4' MDI
Specific chemical identity is withheld as a trade secret.

California Prop 65: This product does NOT contain ingredients which are known to the state of California to cause cancer, birth defects, or other reproductive harm.

HAZARDS DISCLOSURE: This product contains known hazardous materials as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200. As defined under Sara 311 and 312, this product contains known hazardous materials.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW - WARNING! FLAMMABLE LIQUID AND VAPOR. HARMFUL IF SWALLOWED OR INHALED. AFFECTS CENTRAL NERVOUS SYSTEM. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT.

HMIS Rating: Health - 3, Flammability - 2, Reactivity - 1 Personal Protection Index - E
NFPA Rating: Health - 3, Flammability - 2, Reactivity - 1
NFPA/HMIS Definitions: (0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme).
Protective Equipment: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES;
CLASS B EXTINGUISHER

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Potential Health Effects

Acute Inhalation: Inhalation can cause severe irritation of mucous membranes and upper respiratory tract. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting. High concentrations may cause lung damage. An irritant to the nose, throat, and upper respiratory tract. Exposure to high concentrations have a narcotic effect and may cause liver and kidney damage. Persons with a preexisting, nonspecific bronchial hyperactivity can respond to concentrations below the TLV with similar symptoms as well as an asthma attack. Exposure well above the TLV may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). These effects are usually reversible. Chemical or hypersensitive pneumonitis, with flu-like symptoms (e.g. fever, chills) has also been reported.

Chronic Inhalation: As a result of previous repeated overexposures or a single large dose, certain individuals may develop isocyanate sensitization (chemical asthma) which will cause them to react to later exposure to isocyanate at levels well below the TLV. These symptoms, which include: chest tightness, wheezing, cough, shortness of breath or asthmatic attack, could be immediate or delayed up to several hours after exposure. Similar to many non-specific asthmatic responses, there are reports that once sensitized; an individual can experience these symptoms upon exposure to dust, cold air or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Chronic overexposure to isocyanates has also been reported to cause lung damage, including decrease in lung function, which may be permanent. Chronic exposure to organic solvents has been associated with various neurotoxic effects including permanent brain and nervous system damage. Symptoms include loss of memory, loss of intellectual ability and loss of coordination.

Ingestion: Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea.

Skin Contact: Causes irritation to skin. Symptoms include redness, itching, and pain. Repeated or prolonged contact with the skin has a defatting effect and may cause dryness, cracking, and possibly dermatitis.

Eye Contact: Causes irritation, redness, and pain.

Chronic Exposure: Chronic overexposure may cause anemia with leukocytosis (transient increase in the white blood cell count) and damage to the liver and kidneys.

Aggravation of Pre-existing Conditions: Persons with pre-existing skin disorders or eye problems, or impaired liver, kidney or respiratory function may be more susceptible to the effects of the substance.

Carcinogenicity: None of the components of this product are listed by the NTP, IARC, or regulated by OSHA as carcinogens.

Medical Conditions Aggravated by Exposure: Asthma and other respiratory disorders (bronchitis, emphysema, hyper reactivity), skin allergies, eczema.

Exposure Limits: Not established for product as a whole. Refer to Section II for exposure limits of hazardous constituents

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4. FIRST AID MEASURES

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: Do not induce vomiting. Give large amounts of milk or water to drink. Never give anything by mouth to an unconscious person. Get medical attention.

Skin Contact: Immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

NOTE TO PHYSICIAN

Eyes: Stain for evidence of corneal injury. If cornea is burned, instill antibiotic/steroid preparation frequently. Workplace vapors could produce reversible corneal epithelial edema impairing vision.

Ingestion: Treat symptomatically. There is no specific antidote. Inducing vomiting is contraindicated because of the irritating nature of the product.

Inhalation: This product is a known pulmonary sensitizer. Treatment is essentially symptomatic. An individual having a dermal or pulmonary sensitization reaction to this material must be removed from any further exposure to any isocyanate.

5. FIRE FIGHTING MEASURES

Fire: Flash point: 116 F

Autoignition temperature: ~426C (~799F).

Flammable limits in air % by volume: LEL: 0.9% UEL: 7.0%

Flammable Liquid and Vapor! Contact with strong oxidizers may cause fire.

Explosion: Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Sealed containers may rupture when heated. Sensitive to static discharge.

Fire Extinguishing Media: Water spray, dry chemical, alcohol foam, or carbon dioxide. Water may be ineffective. Water spray may be used to keep fire exposed containers cool.

Dry chemical (e.g. monoammonium phosphate, potassium sulfate, and potassium chloride), carbon dioxide, high expansion (proteinic) chemical foam.

Special Fire Fighting Procedures: Full emergency equipment with self-contained breathing apparatus and full protective clothing should be worn by fire fighters. During a fire, MDI vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. At temperatures greater than 400° F, (204° C.) polymeric MDI can polymerize and decompose which can cause pressure build up in closed containers. Explosive rupture is possible.

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Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face-piece operated in the pressure demand or other positive pressure mode. Water may be used to flush spills away from exposures and to dilute spills to non-flammable mixtures. Vapors can flow along surfaces to distant ignition source and flash back.

6. ACCIDENTAL RELEASE MEASURES

Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802. If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures.

7. HANDLING AND STORAGE

Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Outside or detached storage is preferred. Separate from incompatibles. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

Vigorous stirring and flow through the piping and equipment might cause the formation and accumulation of electrostatic charge due to the low conductivity of the product. In order to avoid the risk of fire outbreak and explosion never use compressed air during movement.

Storage Temperature (min/max): 32°F. (0°C)/121°F. (50°C)

Shelf Life: 24 months at 77°F. When unopened.

HANDLING (PERSONNEL): Handle in accordance with good hygiene and safety procedures. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. When transferring materials ground and bond containers, use spark proof tools and explosion proof equipment. Since empty containers contain product residue, follow all hazard warnings and precautions even after container is emptied. Keep away from sources of ignition.

STORAGE PRECAUTIONS: Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from any source of heat or ignition. Avoid dust dispersal. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Airborne Exposure Limits: See Section 2

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

If the exposure limit is exceeded and engineering controls are not feasible, a full facepiece respirator with organic vapor cartridge may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. WARNING: Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection: Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

FORM: Liquid

COLOR: Black

ODOR: Solvent

FLAMMABLE LIMITS: LEL: 0.9% UEL: 7.0%

SOLUBILITY IN WATER: Insoluble

VISCOSITY: 250-500 CPS @ 25°C (77°F) □

PH: N/A

MELTING/FREEZING POINT: N/D

BOILING POINT: 180- 200°C (356 - 392°F) □□

EVAPORATION RATE (BuAc=1): Slower than ether

FLASH POINT: 116°F

AUTOIGNITION TEMPERATURE: ~426C (~799F)

VAPOR DENSITY (Air=1): Heavier than air

% VOLATILES BY VOLUME @ 21°C (70°F): <30

VAPOR PRESSURE (mm Hg): <10mm @ 25°C

SPECIFIC GRAVITY: 1.104 Kg/l (8.012 #/gallon)

VOLATILE ORGANIC COMPOUNDS (VOC #/gal): 339 g./liter

10. STABILITY AND REACTIVITY

Stability: Stable under ordinary conditions of use and storage. Heat will contribute to instability. Slowly decomposed by moisture.

Hazardous Decomposition Products: Carbon dioxide and carbon monoxide may form when heated to decomposition.

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Hazardous Polymerization: May occur. Contact with moisture and other materials which react with isocyanates or temperatures over 400oF. (204oC.) may cause polymerization..

Incompatibilities: Avoid heat, flame and other sources of ignition. Contact with nitrates, strong oxidizers, strong alkalis, or strong acids may cause fire and explosions. Water may react to form carbon dioxide. Will attack some forms of plastic, rubber, and coatings.

Conditions to Avoid: Avoid contact with water Can cause some corrosion to copper alloys and aluminum.

11. TOXICOLOGICAL INFORMATION

Acute effects: stinging eyes. Symptoms may include: rubescence, edema, pain and lachrymation. Vapor inhalation may moderately irritate the upper respiratory tract. Contact with skin may cause slight irritation. Ingestion may cause health problems including stomach pain and sting, nausea and sickness.

This product may have a degreasing action on the skin, producing dryness and chapped skin after repeated exposure.

This product contains highly volatile substances, which may cause serious depression of the central nervous system (CNS) and have negative effects, such as drowsiness, dizziness, slow reflexes, and narcosis.

-----\Cancer Lists\-----

Ingredient	---NTP Carcinogen---		
	Known	Anticipated	IARC Category
Diisocyanate (MDI) (26447-40-5)	No	No	None
MDI Based Polyisocyanate	No	No	None
4,4'-Diphenylmethane (101-68-8)	No	No	None
Aluminum (7429-90-5)	No	No	None
Aromatic Solvent Blend (1330-20-7)	No	No	None
Isobutyl Acetate (110-19-0)	No	No	None

12. ECOLOGICAL INFORMATION

Environmental Fate:

When released into the soil, this material may leach into groundwater. When released into the soil, this material may evaporate to a moderate extent. When released into water, this material may biodegrade to a moderate extent.

When released to water, this material is expected to quickly evaporate. When released into the water, this material is expected to have a half-life of less than 1 day. This material has a log octanol-water partition coefficient of less than 3.0. This material is not expected to significantly bioaccumulate. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals.

When released into the air, this material may be moderately degraded by photolysis. When released into the air, this material is expected to have a half-life between 1 and 10 days.

Environmental Toxicity: No Data Available.

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13. DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. TRANSPORTATION INFORMATION

These goods must be transported by vehicles authorized to the carriage of dangerous goods according to the provisions set out in the current edition of the Code of International Carriage of Dangerous Goods by Road (ADR) and in all the applicable national regulations. These goods must be packed in their original packaging or in packaging made of materials resistant to their content and not reacting dangerously with it. People loading and unloading dangerous goods must be trained on all the risks deriving from these substances and on all actions that must be taken in case of emergency situations.

Domestic (Land, D.O.T.) – Not Regulated Material

ADR: N/A
 PRODUCT LABEL: Rust Bullet BlackShell
 UN NUMBER: N/A
 D.O.T. HAZARD CLASS: N/A
 PACKING GROUP: N/A
 D.O.T. SHIPPING NAME: Paint
 SPECIAL PROVISIONS: 640E

Domestic (AIR) – Not Regulated Material (Containers less than 5-Liters)

International (Water, I.M.O.)

IMO CLASS: 3
 PRODUCT LABEL: Rust Bullet BlackShell
 UN NUMBER: 1263
 D.O.T. HAZARD CLASS: 3
 PACKING GROUP: III
 D.O.T. SHIPPING NAME: Paint
 PRODUCT RQ (LBS): N/A
 EMS: F-E, S-E

International (Air, I.C.A.O.)

IATA: 3
 PRODUCT LABEL: Rust Bullet BlackShell
 UN NUMBER: 1263
 D.O.T. HAZARD CLASS: 3
 PACKING GROUP: III
 D.O.T. SHIPPING NAME: Paint

CARGO: Packing Instructions: 310 Maximum Quantity: 220L

PASS.: Packing Instructions: 309 Maximum Quantity: 60L
 Special Instructions: --

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15. REGULATORY INFORMATION

FEDERAL REGULATORY STATUS: OSHA Classification: Product is hazardous according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Chemical Weapons Convention: No **TSCA 12(b):** No **CDTA:** No

SARA 311/312: Acute: No Chronic: YES Fire: YES Pressure: No
Reactivity: No (Mixture / Liquid)

Australian Hazchem Code: 3[Y]

Poison Schedule: None allocated.

WHMIS: This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

This material or all of its components are listed on the Inventory of Existing Chemical Substances under the Toxic Substance Control Act (TSCA). This material or all of its components are listed on the Canadian Domestic Substances List (DSL). This material or all of its components are listed (or considered as having been notified) on the European Inventory of Existing Chemical Substances (EINECS). Other inventory lists: ENCS (Japan), Korea, Australia, China (Draft), PICCS (Philippines), Japan (ENCS).

Component Name/CAS#	Concentration	State Code
Diphenylmethane Diisocyanate	Less than 1.5%	NJ4

The following chemicals are specifically listed by individual states; other products specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

<u>Component Name/CAS#</u>	<u>Concentration</u>	<u>State Code</u>
Diphenylmethane Diisocyanate (MDI) (2.2;2.4) 26447-40-5	Less than 1.5%	NJ 4
Polyisocyanate Based on MDI	Less than 70%	PA 3, NJ 4
NJTSRN (31765300002)- 5317P	Less than 15%	PA1, FL, IL, MA, RI, NJ1, NJ4, CN2
FL	Florida Substance List	
IL	Illinois Toxic Substances List	
MA	Massachusetts Hazardous Substance List	
NJ1	New Jersey Hazardous Substance	
NJ4	New Jersey Other – Included in 5 predominant ingredients >1%	
PA3	Pennsylvania Non-Hazardous present at 3% or greater	
RI	Rhode Island List of Designated Substances	
CN2	Canada WHMIS Ingredient Disclosure List over 0.1%	

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16. OTHER INFORMATION

Label Hazard Warning: DANGER! FLAMMABLE LIQUID AND VAPOR. HARMFUL OR FATAL IF SWALLOWED OR INHALED. AFFECTS CENTRAL NERVOUS SYSTEM. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. MAY BE HARMFUL IF ABSORBED THROUGH SKIN. CHRONIC EXPOSURE CAN CAUSE ADVERSE LIVER, KIDNEY, AND BLOOD EFFECTS. FLAMMABLE LIQUID AND VAPOR.

Label Precautions: Keep away from heat, sparks and flame. Avoid breathing vapor. Keep container closed. Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

Label First Aid: In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, give large amounts of water to drink. Never give anything by mouth to an unconscious person. In all cases, get medical attention.

Prepared By: Donato Polignone
Approval Date: July 18, 2006

Part Number: N/A (Official Copy)

ADDITIONAL INFORMATION:

The data in this Material Safety Data Sheet relates only to the specific material designated herein. It does not relate to use in combination with any other material or in any process. This Material Safety Data Sheet (MSDS) has been reviewed to fully comply with the guidance contained in the ANSI MSDS standard (ANSI Z400.1-1998).

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END OF MSDS