

## SAFETY DATA SHEET

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

**1.1. Product identifier** Bug Blocker Insect Repellent

**Synonyms:** Not applicable

**Chemical Abstracts Registry No:** Mixture

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

For Manufacturing of End-Use Insect Repellent Products Only

**1.3. Details of the supplier of the safety data sheet**

Vertellus Performance Materials Inc.  
2110 W. Gate City Blvd  
Greensboro, NC 27403 USA  
1-336-292-1781

**e-mail Address:** sds@vertellus.com

**1.4. Emergency telephone number**

**Vertellus:** 1-336-292-1781

**CHEMTREC (USA):** +1-800-424-9300 (collect calls accepted)

**CHEMTREC (International):** +1-703-527-3887 (collect calls accepted)

**NRCC (China):** +86 532 83889090

### SECTION 2: Hazards identification

**2.1. Classification of the substance or mixture** (According to Regulation (EC) No 1272/2008, 29 CFR 1910.1200 and the Globally Harmonized System)

Skin Sensitization Category 1  
Skin Irritation Category 2  
Serious Eye Irritation Category 2  
Specific Target Organ Systemic Toxicity Single Exposure Category 3  
Environmental Chronic Category 3  
Acute Toxicity Oral Category 4  
Flammable Liquids Category 2  
Flammable Gas Category 1  
Carcinogenicity Category 1A  
Mutagenicity Category 1B

**2.2. Label elements**

**Hazard Symbols (Pictogram):**



**Signal Word:**

Danger

**Hazard Precautions:**

H302 - Harmful if swallowed.

H315 - Causes skin irritation.

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H317 - May cause an allergic skin reaction.  
H319 - Causes serious eye irritation.  
H336 - May cause drowsiness or dizziness.  
H412 - Harmful to aquatic life with long lasting effects.  
H225 - Highly flammable liquid and vapour.  
H350 - May cause cancer  
H340 - May cause genetic defects  
H220 - Extremely flammable gas

**Prevention Precautionary Statements:** P210 - Keep away from heat/sparks/open flames/hot surfaces. – No smoking.  
P233 - Keep container tightly closed.  
P270 - Do not eat, drink or smoke when using this product.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P281 - Use personal protective equipment as required.  
P240 - Ground/bond container and receiving equipment.  
P241 - Use explosion-proof electrical/ventilating/lighting/telecommunication/computer/ equipment.  
P242 - Use only non-sparking tools.  
P243 - Take precautionary measures against static discharge.

**First Aid Precautionary Statements:** P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308+P313 - IF exposed or concerned: Get medical advice/attention.  
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.  
P337+P313 - If eye irritation persists: Get medical advice/attention.  
P363 - Wash contaminated clothing before reuse.  
P377 - Leaking gas fire: Do not extinguish unless

**Storage Precautionary Statements:** P403+P235 - Store in a well-ventilated place. Keep cool.

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances or 3.2. Mixtures

Ingredient	CAS Number	Concentration (weight %)	EC Number	CLP Inventory/ Annex VI	EU CLP Classification (1272/2008)
Isopropyl Alcohol	67-63-0	30 - 40	200-661-7	603-117-00-0	Eye Irrit. 2; H319 Flam. Liq. 2; H225 STOT SE 3; H336
N,N-Diethyl-m-toluamide (DEET)	134-62-3	25	205-149-7	616-018-00-2	Aquatic Chronic 3; H412 Acute Tox. 4; H302 Eye Irrit. 2; H319 Skin Irrit. 2; H315
Liquefied petroleum gas	68476-85-7	20 - 30	270-704-2	649-202-00-6	Carc. 1A; H350 Press. Gas (*); H280 Flam. Gas 1; H220 Muta. 1B

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n-Octyl bicycloheptene dicarboximide	113-48-4	5	204-029-1	Not listed.	Acute Tox. 3; H311 Skin Sens. 1; H317
Di-n-propyl isocinchomeronate (MORPEL® 326)	136-45-8	3	205-245-9	Not listed.	Aquatic Acute 1; H400 Skin Irrit. 2; H315
Propylene Glycol	57-55-6	3	200-338-0	Not listed.	Not applicable.

NOTE: See Section 8 for exposure limit data for these ingredients. See Section 15 for trade secret information (where applicable). See Section 16 for the full text of the R-phrases above.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

Skin Contact:	Wash thoroughly after skin contact. Immediately flush with water for 15 minutes. Wash the contaminated skin with soap and water. If irritation develops, call a physician.
Eye Contact:	Immediately flush eyes with plenty of water. Get medical attention, if irritation persists. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and tested by medical personnel. GET MEDICAL ATTENTION.
Inhalation:	Remove from exposure. If not breathing, give artificial respiration and call a physician. Seek medical advice if symptoms persist.
Ingestion:	If swallowed, contact physician or poison control center immediately. Do NOT induce vomiting. Do not give anything by mouth to an unconscious person.

#### 4.2. Most important symptoms and effects, both acute and delayed

Acute:	May cause drowsiness and dizziness, headache, nausea & vomiting. Harmful if absorbed through the skin. Harmful if swallowed. Causes moderate eye irritation. Can cause skin irritation. Can cause a burning or prickling sensation on more sensitive areas (face, eyes, mouth). Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Excessive inhalation may cause nasal and respiratory irritation.
Delayed Effects:	None known.

#### 4.3. Indication of any immediate medical attention and special treatment needed

Note to Physician:	No specific indications. Treatment should be based on the judgment of the physician in response to the reactions of the patient.
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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Appropriate Extinguishing Media:	Foam, Dry chemical, Carbon dioxide, Water spray. Do not use water jet as this will spread the fire.
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#### 5.2. Special hazards arising from the substance or mixture

Hazardous Products of Combustion:	Combustion will produce carbon monoxide, carbon dioxide and oxides of nitrogen.
Potential for Dust Explosion:	Not applicable.

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**Special Flammability Hazards:** Potential explosion hazard in the form of vapor (within flammability limits) when exposed to heat, flame or static discharge. Contents under pressure. Pressurized container may rupture when exposed to heat or flame.

### 5.3. Advice for firefighters

**Basic Fire Fighting Guidance:** Wear self-contained breathing apparatus and protective clothing. Normal firefighting procedures may be used.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

**Evacuation Procedures:** Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

**Special Instructions:** See Section 8 for personal protective equipment recommendations. Remove all contaminated clothing to prevent further absorption. Decontaminate affected personnel using the first aid procedures in Section 4. Leather shoes that have been saturated must be discarded. Remove all possible sources of ignition in the surrounding area. Many vapors are heavier than air and will spread along the ground and collect in low or confined areas.

### 6.2. Environmental precautions

Prevent releases to soils, drains, sewers and waterways.

### 6.3. Methods and material for containment and cleaning up

Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Do not allow the spilled product to enter public drainage system or open waterways. Stop the flow of material, if this is without risk. Material can then be collected (eg., suction) for later disposal.

### 6.4. Reference to other sections

Refer to section 8 for information on selecting personal protective equipment. Refer to section 13 for information on spilled product, absorbent and clean up material disposal instructions.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

**Precautions for Unique Hazards:** Minimize fire risks from flammable and combustible materials. Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source.

**Practices to Minimize Risk:** Wear appropriate protective equipment when performing maintenance on contaminated equipment. Wash hands thoroughly before eating or smoking after handling this material. Do not eat, drink or smoke in work areas. Prevent contact with incompatible materials. Avoid spills and keep away from drains. Handle in a manner to prevent generation of aerosols, vapors or dust clouds.

**Special Handling Equipment:** Not applicable.

### 7.2. Conditions for safe storage, including any incompatibilities

**Storage Precautions & Recommendations:** This product should be stored at ambient temperature in a dry, well-ventilated location. Keep container closed when not in use. Store in a tightly closed container. Maintain dry, ventilated conditions for storage.

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**Dangerous Incompatibility Reactions:** Incompatible with oxidizing materials. Strong acids Strong alkalis

**Incompatibilities with Materials of Construction:** None known

### 7.3. Specific end use(s)

If a chemical safety assessment has been completed an exposure scenario is attached as an annex to this Safety Data Sheet. Refer to this annex for the specific exposure scenario control parameters for uses identified in subsection 1.2.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Country	Occupational Exposure Limit
Isopropyl Alcohol:	
PEL (USA)	Long-term value: 980 mg/m <sup>3</sup> , 400 ppm
REL (USA)	Short-term value: 1225 mg/m <sup>3</sup> , 500 ppm
TLV (USA)	Long-term value: 980 mg/m <sup>3</sup> , 400 ppm; Long-term value: 200 ppm
EL (Canada)	Short-term value: 400 ppm; Long-term value: 200 ppm
EV (Canada)	Short-term value: 400 ppm
LMPE (Mexico)	Short-term value: 400 ppm Long-term value: 200 ppm A4, IBE
Liquefied petroleum gas:	
PEL (USA)	PEL (USA) Long-term value: 1800 mg/m <sup>3</sup> , 1000 ppm
REL (USA)	REL (USA) Long-term value: 1800 mg/m <sup>3</sup> , 1000 ppm
TLV (USA)	TLV (USA) refer to Appendix F in TLVs and BEIs book
EL (Canada)	EL (Canada) Short-term value: 1250 ppm; Long-term value: 1000 ppm
EV (Canada)	EV (Canada) Long-term value: 1,000 ppm

### 8.2. Exposure controls

Also see the annex to this SDS (if applicable) for specific exposure scenario controls.

<b>Other Engineering Controls:</b>	All operations should be conducted in well-ventilated conditions. Local exhaust ventilation should be provided.
<b>Personal Protective Equipment:</b>	Impervious gloves, boots, and clothing, chemical goggles or face shield where necessary, and a NIOSH approved chemical cartridge respirator or supplied air breathing apparatus with organic vapour/acid gas cartridges with particle filters. Do not smoke or eat in areas where this material is handled. Wash hands thoroughly before eating or smoking.
<b>Respirator Caution:</b>	Observe OSHA regulations for respirator use (29 CFR 1910.134). Air-purifying respirators must not be used in oxygen-deficient atmospheres.
<b>Thermal Hazards:</b>	Not applicable.
<b>Environmental Exposure Controls:</b>	The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

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### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Appearance, State & Odor (ambient temperature):	Transparent with a slightly yellow tint. Sweet smell of DEET.		
Molecular Formula:	No data available.	Molecular Weight:	No data available.
Vapor Pressure:	No data available.	Evaporation Rate:	< 1 (Butyl Acetate = 1)
Specific Gravity or Density:	0.998 @ 20°C	Vapor Density (air = 1):	No data available.
Boiling Point:	No data available.	Freezing / Melting Point:	(pour point) -45 °F No data available.
Solubility in Water:	Immiscible in water.	Octanol / Water Coefficient:	2.4 @ 22°C
pH:	No data available.	Odor Threshold:	No data available.
Viscosity:	No data available.	Autoignition Temperature:	No data available.
Flash Point and Method:	> 200 °F (> 93.3°C) Tag Closed Cup	Flammable Limits:	No data available. (LEL) –No data available. (UEL)
Flammability (solid, gas):	No data available.	Decomposition Temperature:	No data available.

### SECTION 10: Stability and reactivity

<u>10.1. Reactivity</u>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<u>10.2. Chemical stability</u>	Stable
<u>10.3. Possibility of hazardous reactions</u>	Will not occur.
<u>10.4. Conditions to avoid</u>	Heat, flames & sparks. Strong acids, strong alkalies, and oxidizing agents.
<u>10.5. Incompatible materials</u>	Incompatible with oxidizing materials. Strong acids; Strong alkalies
<u>10.6. Hazardous decomposition products</u>	Combustion will produce carbon monoxide, carbon dioxide and oxides of nitrogen.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute Oral LD <sub>50</sub> :	Oral LD50 (rat) 4396 mg/kg Oral LD50 (rat) = 1892 mg/kg Oral LD50 (rat) 2800 mg/kg Oral LD50 (rat) 5230 mg/kg Oral LD50 (rat) 20000 mg/kg	Isopropyl Alcohol [KEY] Moore 2000a n-Octyl bicycloheptene dicarboximide Di-n-propyl isocinchomeronate (MORPEL® 326) Propylene Glycol
Acute Dermal LD <sub>50</sub> :	Dermal LD50 (rabbit) 12800 mg/kg Dermal LD50 (rat) > 5000 mg/kg Dermal LD50 (rabbit) 470 mg/kg	Isopropyl Alcohol [KEY] Moore 2001a n-Octyl bicycloheptene dicarboximide

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Acute Inhalation LC <sub>50</sub> :	Inhalation LC <sub>50</sub> (4h) (rat) > 4.47 mg/L	Isopropyl Alcohol
Skin Irritation:	Irritating to the skin.	
Eye Irritation:	Moderately irritating to eyes.	
Skin Sensitization:	Positive skin sensitizer	
Mutagenicity:	Inhalation exposure of mice to 50, 200, 500 or 1300 ppm (110, 442, 1106 or 2876 mg/m <sup>3</sup> ) of 1,3-butadiene for 6 h per day for 5 consecutive days caused micronuclei in mouse bone marrow and peripheral blood erythrocytes. (Petroleum gases, liquefied)	
Reproductive / Developmental Toxicity:	No data available.	
Carcinogenicity:	None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as being carcinogens.	
Target Organs:	Narcotic effects	
Primary Route(s) of Exposure:	Skin contact and absorption, eye contact, and inhalation. Ingestion is not likely to be a primary route of exposure.	
Most important symptoms and effects, both acute and delayed	May cause drowsiness and dizziness, headache, nausea & vomiting. Harmful if absorbed through the skin. Harmful if swallowed. Causes moderate eye irritation. Can cause skin irritation. Can cause a burning or prickling sensation on more sensitive areas (face, eyes, mouth). Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Excessive inhalation may cause nasal and respiratory irritation. Delayed Effects: None known.	
Additive or Synergistic effects:	None known.	
Additional Toxicity Information:	Toxicological data are for components.	

### SECTION 12: Ecological information

<u>12.1. Toxicity</u>	<p>&gt; 1000 mg/L          13299 mg/L          &gt; 1400000          11130 MG/L [STATIC]          Aquatic EC<sub>50</sub> (48h) Daphnia = 75 ppm          Aquatic LC<sub>50</sub> (96h) Oncorhynchus mykiss (rainbow trout) = 97 mg/L          Aquatic LC<sub>50</sub> Colinus virginianus (Northern bobwhite quail) = 1375 mg/kg</p>	<p>Isopropyl Alcohol          [KEY] Forbis 1989          [KEY] Palmer 2002          [KEY] Grimes 1989          [KEY] Desjardins 2002          Di-n-propyl isocinchomeronate (MORPEL® 326)          Propylene Glycol</p>
<u>12.2. Persistence and degradability</u>	No data is available on the mixture	
<u>12.3. Bioaccumulative potential</u>	Bioconcentration is not expected to occur.	
<u>12.4. Mobility in soil</u>	This material is expected to have high mobility in soil. It absorbs weakly to most soil types.	
<u>12.5. Results of PBT and vPvB assessment</u>	No data available.	
<u>12.6. Other adverse effects</u>	This pesticide is highly toxic to fish. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollution Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to the discharge. Do not discharge effluent containing this product into sewer	

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systems without previously notifying local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA. Eco-toxicological data are for components.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

US EPA Waste Number:	D001: Waste flammable material with a flash point <140°F
Waste Classification: (per US regulations)	The waste is ignitable.
Waste Disposal:	NOTE: Generator is responsible for proper waste characterization. State hazardous waste regulations may differ substantially from federal regulations. Dispose of this material responsibly, and in accordance with standard practice for disposal of potentially hazardous materials as required by applicable international, national, regional, state or local laws, and environmental protection duty of care principles. Do NOT dump into any sewers, on the ground, or into any body of water. For disposal within the EC, the appropriate classification code according to the European Community List of Wastes should be used. Note that disposal regulations may also apply to empty containers and equipment rinsates.

### SECTION 14: Transport information

*The following information applies to all shipping modes (DOT/IATA/ICAO/IMDG/ADR/RID/ADN), unless otherwise indicated:*

14.1. UN number	UN1950	14.2. UN proper shipping name	Aerosols, Flammable, Limited Quantity
14.3. Transport hazard class(es)	2.1	14.4. Packing group	Aerosols are not assigned a packing group.
14.5. Environmental hazards	Not applicable		
14.6. Special precautions for user	US DOT (ground): Consumer Commodity, ORM-D ICAO/IATA (air): Consumer Commodity, ID8000, 9		
NA Emergency Guidebook Numbers:	Not applicable	IMDG EMS:	F-D,S-U
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code			Not applicable.

### SECTION 15: Regulatory information

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Chemical Inventory Lists:	Status:		
USA TSCA:	regulated by FIFRA	EINECS:	Listed
Canada(DSL/NDSL):	DSL	Japan:	Listed
Korea:	Listed	Australia:	Listed
China:	Listed	Philippines:	Not listed
Taiwan:	Not listed	New Zealand:	Not listed



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German Water Hazard Classification: ID Number 4679, hazard class 2 - hazard to waters

SARA 313: Dipropyl isocinchomeronate (CAS 136-45-8)

State Regulations: **New Jersey Worker and Community Right-to-Know Act**  
 Propylene glycol (CAS 57-55-6)  
 Dipropyl isocinchomeronate (CAS 136-45-8)  
 Isopropyl alcohol (CAS 67-63-0)  
**Massachusetts RTK - Substance List**  
 Isopropyl alcohol (CAS 67-63-0)  
**Pennsylvania Worker and Community Right-to-Know Law**  
 Isopropyl alcohol (CAS 67-63-0)  
 Propylene glycol (CAS 57-55-6)

HMIS IV:

HEALTH	1
FLAMMABILITY	3
PHYSICAL HAZARD	0

NFPA:



### 15.2. Chemical safety assessment

A chemical safety assessment has not been performed on this mixture.

## SECTION 16: Other information

### Legend of Abbreviations:

ACGIH = American Conference on Governmental Industrial Hygienists.

CAS = Chemical Abstracts Service.

CFR = Code of Federal Regulations.

DSL/NDL = Domestic Substances List/Non-Domestic Substances List.

EC = European Community.

EINECS = European Inventory of Existing Commercial Chemical Substances.

ELINCS = European List of Notified Chemical Substances.

EU = European Union.

GHS = Globally Harmonized System.

LC = Lethal Concentration.

LD = Lethal Dose.

NFPA = National Fire Protection Association.

NIOSH = National Institute of Occupational Safety and Health.

NTP = National Toxicology Program.

OSHA = Occupational Safety and Health Administration

PEL = Permissible Exposure Limit.

RQ = Reportable Quantity.

SARA = Superfund Amendments and Reauthorization Act of 1986.

TLV = Threshold Limit Value.

WHMIS = Workplace Hazardous Materials Information System.

**Important Note:** Please note that the information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. The information contained herein may change without prior notice. THIS SAFETY DATA SHEET SUPERSEDES ALL PREVIOUS EDITIONS.

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Issued by: Regulatory Management Department Email: SDS@Vertellus.com

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