# SAFETY DATA SHEET

<table>
<thead>
<tr>
<th>Product:</th>
<th>Bushman Water Resistant Insect Repellent</th>
<th>Date Prepared:</th>
<th>15 Dec 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company:</td>
<td>Juno Ltd</td>
<td>Replaces:</td>
<td>18 Jan 2010</td>
</tr>
</tbody>
</table>

## 1 Identification

<table>
<thead>
<tr>
<th>Product Name:</th>
<th>Bushman Water Resistant Insect Repellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Names:</td>
<td>Ultra Dry Gel</td>
</tr>
<tr>
<td>Manufacturer's Product Code:</td>
<td>BU75G</td>
</tr>
<tr>
<td>Uses:</td>
<td>Personal Insect Repellent</td>
</tr>
<tr>
<td>Supplier Name:</td>
<td>Juno Ltd</td>
</tr>
<tr>
<td>Address:</td>
<td>68 Bond St West, Modialloc, Vic. 3195 Australia</td>
</tr>
<tr>
<td>Telephone:</td>
<td>+61 (0)3 9587 8514</td>
</tr>
</tbody>
</table>

## 2 Hazards Identification

Users of the product should refer to the APVMA approved label on the container for advice in relation to use and handling of the product.

The hazard information contained in this SDS is for people handling the product and its ingredients in the manufacturing environment.

### Hazard Class and Category:
- Acute Toxicity (Category 4)
- Eye Irritation (Category 2)
- Skin Irritation (Category 2)
- Aquatic Chronic (Category 3)

### Signal Word:
- Warning

### Hazard Statements:
- Harmful if swallowed
- Causes serious eye irritation.
- Causes skin irritation.
- Harmful to aquatic life with long lasting effects
Precautionary Statements:

**Prevention**
Wash exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves and eye protection/face protection.
Avoid release to the environment.

**Response**
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.
IF ON SKIN: Wash with plenty of soap and water. If exposed or if you feel unwell: Call a POISON CENTER or doctor/physician. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

3 Composition / Ingredients

<table>
<thead>
<tr>
<th>Identity (Other Names)</th>
<th>CAS Number</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEET (Diethyltoluamide)</td>
<td>134-62-3</td>
<td>80%</td>
</tr>
<tr>
<td>Other ingredients not individually contributing to the hazard classification</td>
<td>-</td>
<td>20%</td>
</tr>
</tbody>
</table>

4 First Aid Measures

<table>
<thead>
<tr>
<th>First Aid</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Swallowed:</strong></td>
</tr>
<tr>
<td><strong>In Eye:</strong></td>
</tr>
<tr>
<td><strong>On Skin:</strong></td>
</tr>
<tr>
<td><strong>Inhaled:</strong></td>
</tr>
<tr>
<td><strong>Advice to Doctor:</strong></td>
</tr>
</tbody>
</table>

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone 13 11 26.
5 Fire Fighting Measures

**Extinguishing Media:** Foam, dry chemical, CO₂ or water spray

**Hazardous Combustion Products:** Gases evolved in fire could include carbon monoxide, carbon dioxide and nitrous oxides.

**Precautions for Fire Fighters:** Normal fire-fighting procedures can be used. Avoid contamination with oxidising materials (e.g. pool chlorine) as ignition may occur.

**Hazchem Code:** None allocated

6 Accidental Release Measures

**Emergency Procedures:**
Product is packaged in small containers and intended for application onto skin. Small spills are unlikely to pose significant risk.

**In manufacturing environment or handling bulk material:** Wear chemical resistant footwear, gloves and coveralls when handling large spills. Ensure adequate ventilation. If ventilation inadequate wear respirator fitted with organic vapour filter.

**Containment of Spill:**
- In case of small spill, collect packaging, mop or wipe up, wrap packaging and material in paper and dispose of in garbage. Wash area with water and detergent.
- In case of large spill, cover with absorbent material. Shovel material into clean, dry, labelled containers and close lid. Do not allow material to enter waterways.

7 Handling and Storage

**Precautions for Safe Handling:** Product is designed for application to the skin. Avoid contact with eyes and plastic.

**Conditions for Safe Storage:** Store in original container and out of reach of children.

8 Exposure Controls / Personal Protection

**Exposure Standards:** None applicable

**Engineering Controls:**
None applicable. Normal ventilation is usually adequate. If ventilation inadequate use forced air ventilation.

### Personal Protective Equipment (Manufacturing environment):

**Respiratory Protection:**
Not normally required. If required use a respirator fitted a cartridge suitable for organic vapours/mists.

**Eye and Face Protection:**
In the manufacturing environment wear chemical resistant goggles or face shield.

**Skin and Body Protection:**
Not normally required. Product is intended for application to skin. In the manufacturing environment wear chemical resistant gloves and coveralls covering arms and legs. Chemical resistant footwear is recommended.

### 9 Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear viscous liquid</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Insoluble</td>
</tr>
<tr>
<td>pH</td>
<td>5.5 – 6.5</td>
</tr>
<tr>
<td>Specific Gravity / Density</td>
<td>0.99 – 1.10</td>
</tr>
</tbody>
</table>

### 10 Stability and Reactivity

**Chemical Stability:**
Stable under normal conditions.

**Incompatible Materials:**
Oxidising or reducing agents, strong acids and strong alkalis.

**Hazardous Decomposition Products:**
In fire, carbon monoxide, carbon dioxide and nitrogen oxides may be produced.

### 11 Toxicological Information
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**Acute**

**Swallowed:**
Estimated LD₅₀ > 3975 mg/kg

**In Eyes**
Irritant.

**On Skin**
In rare instances may cause skin irritation and/or sensitisation.

**Inhaled:**
Not hazardous

**Chronic:**
Does not contain any component that is classified as a carcinogen.

**Mutagenicity:**
Does not contain components known to be mutagenic

**Reproduction/Development**
Does not contain components known to cause reproductive or developmental effects

**Specific Target Organ Toxicity:** Specific Target Organ Toxicity (Single Exposure):
No information found

12 Ecological Information

**Environmental Data:**
DEET: lowest found acute aquatic EC₅₀ = 75 mg/L.
DEET: lowest found Chronic NOEL = 0.5 mg/L.

**Persistence and Degradability:**
The active constituent (DEET) is not expected to bioaccumulate.
Modelling suggests rapid to moderate degradation.

Contains materials of mineral origin that are likely to persist in the environment.

13 Disposal Considerations

**Disposal Methods:**
Small quantities can be disposed of in household garbage.
Large quantities should be disposed of in accordance with local
14 Transport Information

Not classified as Dangerous Goods for Transport by Road and Rail within Australia according to the criteria of ADG 7.

<table>
<thead>
<tr>
<th>UN Number:</th>
<th>None assigned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipping Name:</td>
<td>None assigned</td>
</tr>
<tr>
<td>Class (Subsidiary Risk):</td>
<td>None assigned</td>
</tr>
</tbody>
</table>

15 Regulatory Information

<table>
<thead>
<tr>
<th>Poison Scheduling:</th>
<th>S5</th>
</tr>
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<tbody>
<tr>
<td>Registration/Notification:</td>
<td>Registered by the Australian Pesticides and Veterinary Medicines Authority (APVMA No. 46036).</td>
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</table>

16 Other Information

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Glossary

ACGIH - American Conference of Governmental and Industrial Hygienists.
ASCC - Australian Safety and Compensation Commission.
BCF - Bioconcentration Factor - ability to accumulate a chemical in an organism to levels greater than in the surrounding medium. Calculated by dividing the concentration of a chemical in an organism by the concentration in the surrounding medium.
EC50 - median effective concentration. The concentration of a substance that courses a specified response/effect in an organism or population.
Explosive Limits - The range of concentrations (% by volume in air) of a flammable gas or vapour that can result in an explosion in a confined space.
Koc - the organic carbon partition coefficient (mL soil water /g organic carbon).
LC50 - Lethal Concentration 50%. The concentration of a substance that kills 50% of a target population.
LD50 - Lethal Dose-50%. The dose of a substance that kills 50% of a target population.
NOAEL – The highest dose or concentration of a substance used in a test/study that does not produce any observable adverse effects in the target organism.
NOEL – The highest dose call concentration of a substance used in a test/study that does not produce any observable effects in the target organism.
pH - Measure of how acidic or alkaline a material is using a 1 - 14 scale. pH 1 is strongly acidic and pH 14 strongly alkaline.
Polymerisation - a chemical reaction in which molecules (monomers) combine to form larger molecules (polymers). A hazardous polymerisation reaction is one that occurs at a fast rate and releases large amounts of energy.

$P_{ow}$ - The octanol-water partition coefficient. The ratio of the concentration of octanol and in water at equilibrium and at a specified temperature used in environmental studies to indicate fate of chemicals and the environment.

STEL - Short-Term Exposure Limit. The maximum concentration of a substance that workers can be exposed to for periods up to 15 minutes without adverse effects e.g. irritation, tissue damage, narcosis (drowsiness or unconsciousness).

SWA – Safe Work Australia.

TWA - Time Weighted Average. The time weighted average concentration of a substance that most workers may be repeatedly exposed to over a 8-hour or 40-hour week without adverse effect.

References
Prepared using data supplied by manufacturer and public databases.

Hazard classification conducted according to the Safe Work Australia Guidance on the Classification of Hazardous Chemicals under the WHS Regulations.

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