

# Material Safety Data Sheet

**Product:** Bushman Personal Insect Repellent  
**Company:** North Queensland Laboratories Pty Ltd

**Date Prepared:** 22 September 2008  
**Replaces:** 28 May 2007

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## 1 Identification

**Product Name:** Bushman Plus Personal Insect Repellent  
**Other Names:** 50 g Aerosol; 150 g Aerosol; 350 g Aerosol  
**Uses:** Personal Insect Repellent  
**Supplier**  
**Name:** North Queensland Laboratories Pty Ltd  
**Address:** 63 Koppen Tce, Cairns, Qld 4870 Australia  
**Telephone:** (07) 4054 6020 (24 hours)

## 2 Hazards Identification

Classified as hazardous according to the criteria of NOHSC  
Classified as dangerous goods according to criteria published in the Australian Dangerous Goods Code.

Harmful (Xi): May cause irritation to skin in rare cases. May cause mild irritation to the eyes.

### Risk Phrases:

R36/38: Irritating to eyes and skin

### Safety Phrases:

S2: Keep out of reach of children

## 3 Composition / Ingredients

<u>Identity (Other Names)</u>	<u>CAS Number</u>	<u>Proportion (w/w)</u>
DEET (Diethyltoluamide)	134-62-3	20%
Di-n-propyl isocinchomeronate	136-45-8	2.2%
N-octyl bicycloheptene dicarboximide	113-48-4	4.0%
Ethanol	64-17-5	40-60%
Butane	106-97-8	0-40%
Propane	74-98-6	0-40%
Other ingredients not contributing to hazard		5 — 20%

## 4 First Aid Measures

**Swallowed:** Give water to drink. Contact a doctor or Poisons Information Centre (Phone 13 11 26)

**In Eye:** Wash continuously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek prompt medical attention.

**On Skin:** Intended for application to skin. Remove with soap and water if irritation occurs. Seek Medical advice if irritation persists.

**Inhaled:** Remove to fresh air. If breathing difficulties are experienced, seek medical attention.

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**Advice to Doctor** Treat symptomatically

## 5 Fire Fighting Measures

**Flammability** Highly Flammable

**Extinguishing Media:** Foam, dry chemical, CO<sub>2</sub> or water fog

**Hazardous Combustion Products:** Aerosol containers can explode when heated.

**Precautions for Fire Fighters:** Fight fire from maximum distance possible or from protected area. Wear self-contained breathing apparatus and protective clothing.

**Hazchem Code:** 2Y

## 6 Accidental Release Measures

**Emergency Procedures:** Extinguish any sources of ignition. Do not puncture cans.

**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 plastics. Do not intentionally concentrate and inhale.

**Conditions for Safe Storage:** Store out of reach of children.

## 8 Exposure Controls / Personal Protection

**Exposure Standards:** Ethanol:  
NOHSC: TWA 1000 ppm (1880 mg/m<sup>3</sup>)  
NIOHS REL: TWA 1000 ppm (1900 mg/m<sup>3</sup>)  
OSHA PEL: TWA 1000 ppm (1900 mg/m<sup>3</sup>)  
Butane:  
NOHSC: TWA 800 ppm (1900 mg/m<sup>3</sup>)  
Propane:  
NOHSC: None allocated

**Engineering Controls:** Local exhaust and/or mechanical exhaust, fitted with flame and explosion proof electrical

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fittings recommended.

**Personal Protective Equipment:** Not normally required. Product is intended for application equipment: to skin.

## 9 Physical and Chemical Properties

**Appearance:** Clear Liquid  
**pH:** 5.5 – 6.5

## 10 Stability and Reactivity

**Chemical Stability:** Stable under normal conditions.  
**Conditions to Avoid:** Excessive heat

## 11 Toxicological Information

### Acute

**Swallowed:** Slightly hazardous. Estimated LD<sub>50</sub> >2,000 mg/kg

**In Eyes:** Irritant.

**On Skin:** No effects likely - in rare cases, may cause irritation.

**Inhaled:** Product has relatively low toxicity but can irritate eyes and mucous membranes. Inhalation of high concentrations can result in dizziness, disorientation, nausea and, in extreme cases asphyxiation.

**Chronic** None known

## 12 Ecological Information

**Ecotoxicity:** Not available

## 13 Disposal Considerations

**Disposal Methods:** **Small quantities:** Small quantities may be disposed of in household garbage. Do not puncture cans. Do not incinerate.  
**Large quantities:** Do not puncture cans. Dispose of according to relevant regulations. Do not incinerate.

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## 14 Transport Information

**UN Number:** 1950  
**Proper Shipping Name:** Aerosol  
**Class (Subsidiary Risk):** 2  
**Packing Group:** Not Applicable  
**Special Precautions for User:** Do not puncture cans. Keep away from sources of heat.  
**Hazchem Code:** 2Y

## 15 Regulatory Information

<b>Poison Scheduling:</b>	Not Scheduled
<b>Registration/Notification:</b>	Registered by the Australian Pesticides and Veterinary Medicines Authority

## 16 Other Information

<b>Date Prepared:</b>	22 September 2008
<b>Replaces:</b>	4 March 2005

### 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.

**EC<sub>50</sub>** - 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.

**K<sub>oc</sub>** - the organic carbon partition coefficient (mL soil water /g organic carbon).

**LC<sub>50</sub>** - Lethal Concentration 50%. The concentration of a substance that kills 50% of a target population.

**LD<sub>50</sub>** - 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<sub>ow</sub>** - 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.

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**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).

**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.