

# SAFETY DATA SHEET

<b>Product:</b>	Bushman Plus Personal Insect Repellent Pump Spray	<b>Date Prepared:</b> 26 August 2014
<b>Company:</b>	Juno Limited	Replaces: New
		Page 1 of 7

## 1 IDENTIFICATION

**Product Name:** Bushman Plus Personal Insect Repellent Pump Spray  
**Uses:** Personal insect repellent  
**Supplier:**  
**Name:** Juno Limited  
**Address:** Suite 1, Level 2, 38-40 George Street,  
Parramatta, NSW 2150 Australia  
**Telephone:** +61 (0)2 8861 5000  
(Business hours Australian Eastern Time)

## 2 HAZARDS IDENTIFICATION

### Hazard Class and Category:

Flammable Liquid (Category 3)  
Serious Eye Damage/Irritation (Category 2)  
Skin Irritation (Category 2)  
Hazardous to the Aquatic Environment – Long-Term (Chronic) Hazard  
(Category 3)

### Signal Word:

Warning

### Hazard Statements:

H226 Flammable liquid and vapour  
H319 Causes serious eye irritation  
H315 Causes skin irritation  
H412 Harmful to aquatic life with long lasting effects



### Precautionary Statements:

#### Prevention

P210 Keep away from heat/sparks/open flames/hot surfaces.– No smoking.  
P233 Keep container tightly closed.  
P240 Ground/Bond container and receiving equipment.  
P241 Use explosion-proof equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.  
P280 Wear protective gloves/eye protection/face protection  
P264 Wash hands and other exposed skin thoroughly after handling.

#### Response

P370 + P378 In case of fire: Use alcohol-resistant foam (preferred) or fine

# SAFETY DATA SHEET

<b>Product:</b>	Bushman Plus Personal Insect Repellent Pump Spray	<b>Date Prepared:</b> 26 August 2014
<b>Company:</b>	Juno Limited	Replaces: New
		Page 2 of 7

water spray, water fog, dry chemical or carbon dioxide for extinction.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 If eye irritation persists: Get medical advice/attention.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P332 + P313 If skin irritation occurs: Get medical advice/attention.

P362 Take off contaminated clothing and wash before reuse.

P273 Avoid release to the environment.

## **Storage**

P403 + P235 Store in a well-ventilated place. Keep cool.

## **Disposal**

P501 Dispose of contents/container in accordance with local Regulations.

### 3 COMPOSITION AND INFORMATION ON INGREDIENTS

Substance Name	CAS Number	Concentration
Ethanol	64-17-5	>60%
Diethyltoluamide (DEET)	134-62-3	20%
Di-n-propyl isocinchomeronate	136-45-8	1%
N-Octyl bicycloheptene dicarboximide	113-48-4	1%

### 4 FIRST-AID MEASURES

First-Aid		
-	<b>Inhalation</b>	Specific treatment not normally required. If breathing difficult move to fresh air and keep at rest in a position comfortable for breathing. Apply resuscitation if victim is not breathing.
-	<b>Skin Contact</b>	Intended for application to skin. If irritation occurs discontinue use. If persists seek medical advice.
-	<b>Eye Contact</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists obtain medical advice.
-	<b>Ingestion</b>	Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person. Get medical attention.
<b>Special Advice/Treatment:</b>		No specific antidote. Treat symptomatically.

# SAFETY DATA SHEET

<b>Product:</b>	Bushman Plus Personal Insect Repellent Pump Spray	<b>Date Prepared:</b> 26 August 2014
<b>Company:</b>	Juno Limited	Replaces: New
		Page 3 of 7

**If poisoning occurs, contact a doctor or Poisons Information Centre.  
Phone 13 11 26.**

## 5 FIRE-FIGHTING MEASURES

<b>Suitable Extinguishing Equipment:</b>	Use alcohol-resistant foam (preferred) or fine water spray, water fog, dry chemical or carbon dioxide for extinction
<b>Flash Point:</b>	23.4°C (closed cup)
<b>Explosion Limit Lower: Upper</b>	3.5% (ethanol) 19% (ethanol)
<b>Hazards from Combustion Products:</b>	May produce irritating and/or asphyxiating gases including carbon monoxide, carbon dioxide and oxides of nitrogen.
<b>Precautions for Fire-Fighters</b>	Wear self-contained breathing apparatus and protective clothing if no danger risk of ignition. If potential for ignition keep containers cool by spraying water mist from a safe distance. Prevent run-off from entering drains, sewers and waterways.
<b>HAZCHEM CODE</b>	●2YE

## 6 ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions, Protective Equipment and Emergency Procedures:</b>  Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate all sources of ignition and take measures to prevent static discharge. No smoking. Stop leak if safe to do so. Use water spray to disperse vapour.
<b>Environmental Precautions:</b>  Prevent releases to soils, drains, sewers, and waterways.
<b>Containment:</b>  Cover with non-combustible absorbent material (e.g. sand, soil, vermiculite). Prevent entry into drains, sewers and waterways.
<b>Clean Up:</b>  Sweep and shovel into labelled containers using non-sparking tools for disposal in accordance with local regulations.

# SAFETY DATA SHEET

<b>Product:</b>	Bushman Plus Personal Insect Repellent Pump Spray	<b>Date Prepared:</b> 26 August 2014
<b>Company:</b>	Juno Limited	Replaces: New
		Page 4 of 7

## 7 HANDLING AND STORAGE

### Requirements for Storage Areas and Containers:

Store in dry, well-ventilated area out of reach of children and away from ignition sources, including flames and heat. Keep containers closed. Store away from oxidising materials.

## 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

### Exposure Guidelines:

Ethanol: TWA 1000 ppm / 1880 mg/m<sup>3</sup>

### Engineering Controls:

Use local exhaust ventilation where natural ventilation is not adequate.

### Personal Protective Equipment (Manufacturing environment):

#### Respiratory Protection:

Respiratory protection (organic vapour) should be used where vapours may accumulate. Air-purifying respirators should be used in oxygen deficient atmospheres.

#### Eye and Face Protection:

Eye protection (face shield or chemical resistant goggles) should be worn where there is potential for product to be splashed onto face or into eyes. Note that DEET softens many plastics and face shields/goggles may be damaged if they come into contact with DEET.

#### Skin and Body Protection:

Chemical resistant gloves (butyl rubber) and footwear should be used when handling large quantities of the product.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Clear pale (slight) yellow liquid
<b>Odour:</b>	Typical insect repellent
<b>Flash Point:</b>	23.4°C (closed cup)
<b>Relative Density:</b>	0.854 - 0.874 @ 22°C
<b>Solubility:</b>	Not soluble or miscible in water.

## 10 STABILITY AND REACTIVITY

### Reactivity:

# SAFETY DATA SHEET

<b>Product:</b>	Bushman Plus Personal Insect Repellent Pump Spray	<b>Date Prepared:</b> 26 August 2014
<b>Company:</b>	Juno Limited	Replaces: New
		Page 5 of 7

Hazardous polymerisation not known to occur.

**Stability:**

Stable when stored in cool, well-ventilated conditions.

**Conditions to Avoid:**

Sources of ignition including flames and heat.

**Incompatible Materials:**

Oxidising materials. Strong acids and strong alkalis.

**Hazardous Decomposition Products:**

When heated to decomposition will produce asphyxiating and irritating gases including carbon monoxide, carbon dioxide and oxides of nitrogen.

## 11 TOXICOLOGICAL INFORMATION

**Acute Toxicity:****Oral:**

Low toxicity. Estimated LD<sub>50</sub> >2,000 g/kg

**Inhalation:**

Not a likely route of exposure. Low toxicity expected. Could cause irritation.

**Dermal:**

Low toxicity. Estimated LD<sub>50</sub> >3,000 mg/kg

**Skin Corrosion/Irritation:**

May cause irritation in some people.

**Eye Damage/Irritation:**

Can cause eye irritation. Liquid or mists sprayed into the eye may cause severe irritation or damage to the eyes.

**Sensitisation:**

None of the ingredients in the product are classified as sensitisers.

**Carcinogenicity:**

Not classified as a carcinogen although IARC has classified ethanol as a carcinogen based on the effects caused by drinking alcoholic beverages. Occupational exposure is not known to result in carcinogenic effects.

**Target Organ Toxicity:**

No data are available for the product. Long term ingestion of ethanol may cause changes in liver, kidneys, gastrointestinal tract and heart muscle.

# SAFETY DATA SHEET

<b>Product:</b>	Bushman Plus Personal Insect Repellent Pump Spray	<b>Date Prepared:</b> 26 August 2014
<b>Company:</b>	Juno Limited	Replaces: New
		Page 6 of 7

## 12 ECOLOGICAL INFORMATION

### Ecotoxicity:

DEET is classified as slightly toxic to aquatic organisms (48 hr EC<sub>50</sub> *Daphnia* ≥56 ppm).

Di-n-propyl isocinchomeronate is highly toxic to aquatic organisms (LC<sub>50</sub> Bluegill = 0.44 mg/L).

N-Octyl bicycloheptene dicarboximide is highly toxic to aquatic organisms (LC<sub>50</sub> *Daphnia magna* = 0.51 mg/L).

### Persistence and Degradability:

Modelling for DEET suggests moderate to rapid degradation.

### Bioaccumulation Potential:

N-Octyl bicycloheptene dicarboximide has the potential to bioaccumulate.

## 13 DISPOSAL CONSIDERATIONS

### Disposal of Containers:

Containers may contain residual alcohol which could cause explosion if exposed to sources of ignition. Dispose of empty containers in accordance with local regulations.

### Special Precautions on Incineration or Landfill:

Containers may contain residual alcohol which could cause explosion if exposed to sources of ignition. Do not expose to heat.

## 14 TRANSPORT INFORMATION

Classified as Dangerous Goods for Transport within Australia by Road and Rail according to the criteria of ADG 7.

<b>UN Number:</b>	1993
<b>Proper Shipping Name:</b>	FLAMMABLE LIQUID, N.O.S. (contains ethanol)
<b>Class:</b>	3
<b>Packing Group:</b>	III
<b>Special Precautions:</b>	Avoid spills contacting plastics.
<b>HAZCHEM</b>	●2YE

# SAFETY DATA SHEET

<b>Product:</b>	Bushman Plus Personal Insect Repellent Pump Spray	<b>Date Prepared:</b> 26 August 2014
<b>Company:</b>	Juno Limited	Replaces: New
		Page 7 of 7

## 15 REGULATORY INFORMATION

<b>Poison Scheduling:</b>	Not Scheduled
<b>APVMA Registration No:</b>	69463

## 16 OTHER RELEVANT INFORMATION

Glossary:

**BCF: Bioconcentration Factor** - a measure for the characterization of the accumulation of a chemical in an organism. It is defined as the concentration of a chemical in an organism (plants, microorganisms, animals) divided by the concentration in a reference compartment (e.g. food, surrounding water).

**EC<sub>50</sub>**: Concentration of a substance in an environmental medium expected to produce a certain effect in 50% of test organisms in a given population under a defined set of conditions.

**Explosive Limits** - The range of concentrations (% by volume in air) of a flammable gas or vapour that can result in an explosion for ignition in a confined space.

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

**LC<sub>50</sub>** - The concentration of chemical in air or water that will kill 50% of the test organisms.

**LD<sub>50</sub>** - The dose of a chemical that will kill 50% of the test animals receiving it.

**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.

**P<sub>ow</sub>** - The octanol-water partition coefficient. Commonly used to indicate potential the fate of chemicals in the environment.

**SWA:** Safe Work Australia.

**STEL** - Short Term Exposure Limit, The maximum concentration workers can be exposed to a contaminant in air for up to 15 minutes without suffering adverse effects.

**TWA** - Time Weighted Average. The average concentration of a chemical in air over the total exposure time - usually an 8 hour work day.