

SAFETY DATA SHEET

Product:	Bushman Plus Personal Insect Repellent Pump Spray	Date Prepared: 15 Dec 2016
Company:	Juno Ltd	Replaces: 01 Nov 2016
		Page 1 of 9

1 IDENTIFICATION

Product Name: Bushman Plus Personal Insect Repellent Pump Spray

Other Names: Bushman 20% Pump Spray

Uses: Personal insect repellent

Supplier:

Name: Juno Ltd

Address: 68 Bond St West,
Modialloc, Vic. 3195
Australia

Telephone: +61 (0)3 9587 8514

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:

Flammable Liquid (Category 3)
Eye Irritation (Category 2)
Skin Irritation (Category 2)
Skin Sensitiser (Category 1)



Signal Word:

Warning

Hazard Statements:

Flammable liquid and vapour
Causes serious eye irritation
Causes skin irritation
May cause an allergic skin reaction
Repeated exposure may cause skin dryness and cracking

SAFETY DATA SHEET

Product:	Bushman Plus Personal Insect Repellent Pump Spray	Date Prepared: 15 Dec 2016
Company:	Juno Ltd	Replaces: 01 Nov 2016

Page 2 of 9

Precautionary Statements:

Prevention

Keep away from heat/sparks/open flames/hot surfaces.– No smoking.
Keep container tightly closed.
Ground/Bond container and receiving equipment.
Use explosion-proof equipment.
Use only non-sparking tools. Take precautionary measures against static discharge.
Avoid breathing spray.
Wear protective gloves/eye protection/face protection
Wash hands and other exposed skin thoroughly after handling.
Take off contaminated clothing and wash before reuse.
Contaminated work clothing should not be allowed out of the workplace.
Avoid release to the environment.

Response

In case of fire: Use alcohol-resistant foam (preferred) or fine water spray
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.
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.
IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.

Storage

Store in a well-ventilated place. Keep cool.

3 COMPOSITION AND INFORMATION ON INGREDIENTS

Substance Name	CAS Number	Concentration
Ethanol	64-17-5	30 - 40%
Diethyltoluamide (DEET)	134-62-3	20%
Butane	106-97-8	30%
Other proprietary ingredients not individually contributing to the hazard classification		10 - 20%

SAFETY DATA SHEET

Product:	Bushman Plus Personal Insect Repellent Pump Spray	Date Prepared: 15 Dec 2016
Company:	Juno Ltd	Replaces: 01 Nov 2016

Page 3 of 9

4 FIRST-AID MEASURES

First-Aid		
-	Inhalation	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.
-	Skin Contact	Intended for application to skin. If irritation occurs discontinue use. If irritation persists seek medical advice.
-	Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists obtain medical advice.
-	Ingestion	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.
Special Advice/Treatment:		No specific antidote. Treat symptomatically

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

5 FIRE-FIGHTING MEASURES

Suitable Extinguishing Equipment:	Use alcohol-resistant foam (preferred) or fine water spray, water fog, dry chemical or carbon dioxide for extinction
Flash Point:	23.4°C (closed cup)
Explosion Limit Lower: Upper	3.5% (ethanol) 19% (ethanol)
Hazards from Combustion Products:	May produce irritating and/or asphyxiating gases including carbon monoxide, carbon dioxide and oxides of nitrogen.
Precautions for Fire-Fighters	Wear self-contained breathing apparatus and protective clothing if no

SAFETY DATA SHEET

Product:	Bushman Plus Personal Insect Repellent Pump Spray	Date Prepared: 15 Dec 2016
Company:	Juno Ltd	Replaces: 01 Nov 2016

Page 4 of 9

	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.
HAZCHEM CODE	2YE

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:

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

For large spills: 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.

Environmental Precautions:

For large spills: Prevent releases to soils, drains, sewers, and waterways.

Containment:

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.

For large spills: Cover with non-combustible absorbent material (e.g. sand, soil, vermiculite). Prevent entry into drains, sewers and waterways..

Clean Up:

For large spills: Sweep and shovel into labelled containers using non-sparking tools for disposal in accordance with local regulations.

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.

SAFETY DATA SHEET

Product:	Bushman Plus Personal Insect Repellent Pump Spray	Date Prepared: 15 Dec 2016
Company:	Juno Ltd	Replaces: 01 Nov 2016

Page 5 of 9

8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Guidelines:

Ethanol:

SWA:TWA 1000 ppm (1880 mg/m³)

Butane:

SWA: TWA 800 ppm (1900 mg/m³)

Engineering Controls:

Local exhaust and/or mechanical exhaust, fitted with flame and explosion proof electrical fittings recommended

Personal Protective Equipment (Manufacturing environment):

Respiratory Protection:

Not normally required. 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

Appearance:	Clear pale (slight) yellow liquid
Odour:	Typical insect repellent
Relative Density:	0.854 - 0.874 @ 22°C
Solubility:	Not soluble or miscible in water.

SAFETY DATA SHEET

Product:	Bushman Plus Personal Insect Repellent Pump Spray	Date Prepared: 15 Dec 2016
Company:	Juno Ltd	Replaces: 01 Nov 2016
		Page 6 of 9

10 STABILITY AND REACTIVITY

Reactivity:

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 LD₅₀ > 5,000 mg/kg

Inhalation:

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

Dermal:

Low toxicity. Estimated LD₅₀ >2000 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:

May cause skin sensitivity in some people.

SAFETY DATA SHEET

Product:	Bushman Plus Personal Insect Repellent Pump Spray	Date Prepared: 15 Dec 2016
Company:	Juno Ltd	Replaces: 01 Nov 2016
		Page 7 of 9

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.

12 ECOLOGICAL INFORMATION

Ecotoxicity:

DEET is classified as slightly toxic to aquatic organisms (48 hr EC50 Daphnia \geq 56 ppm).
Di-n-propyl isocinchomeronate is highly toxic to aquatic organisms (LC50 Bluegill = 0.44 mg/L).
N-Octyl bicycloheptene dicarboximide is highly toxic to aquatic organisms (LC50 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.

SAFETY DATA SHEET

Product:	Bushman Plus Personal Insect Repellent Pump Spray	Date Prepared: 15 Dec 2016
Company:	Juno Ltd	Replaces: 01 Nov 2016
		Page 8 of 9

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.

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

15 REGULATORY INFORMATION

Poison Scheduling:	Not Scheduled
APVMA Registration No:	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).

EC₅₀: 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_{oc} - the organic carbon partition coefficient (mL soil water /g organic carbon).

LC₅₀ - The concentration of chemical in air or water that will kill 50% of the test organisms.

SAFETY DATA SHEET

Product:	Bushman Plus Personal Insect Repellent Pump Spray	Date Prepared: 15 Dec 2016
Company:	Juno Ltd	Replaces: 01 Nov 2016
		Page 9 of 9

LD₅₀ - 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_{ow} - The octanol-water partition coefficient. Commonly used to indicate potential the fate of chemicals in the environment.

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.

SWA: Safe Work Australia.

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

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.

© Juno Ltd 2016