



SAFETY DATA SHEET

MAC BUZZ OFF INSECT REPELLENT AEROSOL

Personal Insect Repellent

1. IDENTIFICATION OF THE MATERIAL AND THE MANUFACTURER

| | | | |
|---------------------|--|--------------------------|---|
| Product Name | MAC BUZZ OFF INSECT REPELLENT The forms of 150ml – 300ml; 10-40% | | |
| Address | 108 Rockfield Road, Penrose, Auckland 1061, New Zealand | | |
| Telephone | +64 (9) 579 5139 | | |
| Emergency | National Poisons Centre -24 hours | | |
| E-mail | sales@arandee.co.nz | Australia New Zealand | 13 11 26 0800 POISON 0800 764 766 |
| Web Site | http://www.arandee.co.nz | | |
| Synonym(s) | MAC Buzz Off Tropical Strength Insect Repellent, MAC Buzz Off Professional Strength Insect Repellent, BUZZIR1A, BUZZIR2A | | |
| Use(s) | Long lasting protection against biting and blood seeking insects including mosquitoes sand flies, flies and ticks. | | |

2. HAZARD(S) IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO GHS AND THE HAZARDOUS SUBSTANCES (MINIMUM DEGREE OF HAZARD) REGS 2001. CLASSIFIED AS A DANGEROUS GOOD, UNDER NZS 5433

Classification of the substance mixture
Aerosols: Category 1A
(Repeat Exposure): Category 2
Serious eye damage/eye irritation – Category 2A

GHS Label Elements

Hazard pictograms



Signal Word

DANGER

Hazard Statements

Extremely flammable aerosol.
Causes serious eye irritation.
May cause long lasting harmful effects to aquatic life.

Environmental Hazards

Hazardous to the aquatic environment -Category 4

Hazard Statements

| | |
|------|---|
| H223 | Flammable aerosol |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled |
| H371 | May cause damage to organs |
| H410 | Very toxic to aquatic life with long lasting effects |

Precautionary Statements

| | |
|------|-----------------------------------|
| P103 | Read label before use |
| P104 | Read Safety Data Sheet before use |



| | | |
|----------------------------|-----------|---|
| | P210 | Keep away from heat/open flames. No Smoking |
| | P211 | Do not spray on an open flame or other ignition source |
| | P251 | Pressurized container. Do not pierce or burn even after use |
| | P261 | Avoid breathing spray |
| | P264 | Wash hands thoroughly after handling |
| | P270 | Do not eat, drink or smoke when using this product |
| | P272 | Contaminated work clothing should not be allowed out of the workplace |
| | P273 | Avoid release to the environment |
| | P285 | In case of inadequate ventilation wear respiratory protection |
| Response Statements | P314 | Get medical advice/attention if you feel unwell |
| | P321 | Specific treatment (see information on this label) |
| | P363 | Wash contaminated clothing before re-use |
| | P391 | Collect spillage |
| | P304+P341 | IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing |
| | P309+P311 | IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician |
| | P333+P313 | If skin irritation or rash occurs: Get medical advice/attention |
| | P342+P311 | If experiencing respiratory symptoms. Call a POISON CENTER or doctor/physician |
| Storage Statements | P405 | Store locked up |
| | P410+P412 | Protect from sunlight. Do not expose to temperatures exceeding 50°C |
| Disposal Statements | P501 | Dispose of in accordance with relevant local legislation |

3. HAZARD(S) IDENTIFICATION COMPOSITION OF INGREDIENTS

| Name | % Weight | CAS Number |
|--|-----------|------------|
| HYDROCARBONS, C11-C13, ISOALKANES, <2% AROMATICS | 10-40 | 64742-48-9 |
| ETHANOL | ≥30 - ≤60 | 106-97-8 |
| N,N-DIETHYL-M-TOLUAMIDE | ≥10 - ≤40 | 134-62-3 |
| INGREDIENTS DETERMINED NOT TO BE HAZARDOUS | BALANCE | |

4. FIRST AID MEASURES

| | |
|-------------------|--|
| Eye | If aerosols come in contact with eyes: <ul style="list-style-type: none">• Immediately hold eyelids apart and flush the eye with fresh running water• Ensure complete irrigation of the eye by keeping eyelids apart and away from eye moving the eyelids by occasionally lifting the upper the lower lids.• Seek medical attention without delay; if pain persists or recurs seek medical attention.• Removal of contact lenses after an eye injury should only be taken by skilled personnel. |
| Inhalation | If aerosols, fumes or combustion products are inhaled: <ul style="list-style-type: none">• Remove to fresh air |



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- Lay patient down. Keep warm and rested
 - Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
 - If breathing is shallow and has stopped, ensure clear airway and apply resuscitation, preferably with a demand valve

Ingestion

Not considered a normal route of entry

- Avoid giving milk or oils
- Avoid giving alcohol

Advice to Doctor

Treat symptomatically.

First Aid Facilities

Eye wash facilities should be provided.

5. FIRE FIGHTING MEASURES

Extinguishing

Dry agent, carbon dioxide foam, or water fog. Prevent contamination of drains or waterways; absorb runoff with sand or similar.

Flammability

Highly flammable. Vapours may form explosive mixtures with air. May evolve toxic gases (carbon oxides, hydrocarbons) when heated to decomposition temperatures. When handling a significant spillage, eliminate all ignition sources, including cigarettes, open flames, spark producing switches, heaters, naked lights, mobile phones, etc. Aerosol cans may explode when heated above 50 °C.

Fire and Explosion

Highly flammable, explosive vapour. Evacuate area and contact emergency services. Toxic gases may evolve, when heated. Remain upwind and notify those downwind of hazard. Wear full protective equipment, including Self Contained Breathing Apparatus (SCBA), when combating fire. Use waterfog to cool intact containers and nearby storage areas.

HazChem Code

2Y

6. ACCIDENTAL RELEASE MEASURES

For non-emergency personnel

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurised contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in the hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders

If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel"

Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and



sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Spillage

If large quantities of cans are punctured (bulk), clear area of all unprotected personnel and ventilate area. Wear splash-proof goggles, leather gloves, coveralls and boots. Where inhalation risks exist, wear a Type A-Class P1 (Organic vapour and Particulate) respirator. Collect cans and allow to discharge outdoors. Absorb any residues with sand or similar and place in clean containers for disposal. DO NOT wash away into drains or waterways.

7. HANDLING AND STORAGE

Handling

Use safe work practices to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Keep out of the reach of children. DO NOT puncture aerosol cans or incinerate, even when empty.

Storage

Store in a cool, dry well-ventilated area, well away from oxidising agents, acids, alkalis, direct sunlight, heat or ignition sources, or foodstuffs. Ensure containers are adequately labelled, protected from physical damage, and sealed when not in use. Check regularly for leaks or spills. Large storage areas should have appropriate fire protection.

Do not store above the following temperature

50 °C

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters**Occupational Exposure Limits (OEL)****INGREDIENT DATA**

| Source | Ingredient Name | Exposure Limits |
|--|-----------------|--|
| New Zealand Workplace Exposure Standards (WES) | ethanol | NZ OSH (New Zealand, 2/2013). WES-TWA: 1000 ppm 8 hours. WES-TWA: 1880 mg/m ³ 8 hours. |
| New Zealand Workplace Exposure Standards (WES) | butane | NZ OSH (New Zealand, 2/2013). WES-TWA: 800 ppm 8 hours. WES-TWA: 1900 mg/m ³ 8 hours. |

EMERGENCY LIMITS

| Ingredient | Material Name | TEEL-1 | TEEL-2 | TEEL-3 |
|--|--|-----------------------|-------------------------|--------------------------|
| Hydrocarbons, C11-C13, isoalkanes, <2% aromatics | Naphtha, hydrotreated heavy; (isopar L- rev 2) | 350 gm/m ³ | 1,800 mg/m ³ | 40.000 mg/m ³ |

| Ingredient | Original IDLH | Revised IDLH |
|---|-------------------------|---------------|
| Hydrocarbons, C11-C13 isoalkanes, <2% aromatics | 2,500 mg/m ³ | Not Available |

EXPOSURE CONTROLS**Appropriate engineering controls**

Avoid inhalation. Use in well-ventilated areas. Where inhalation risk exists, mechanical explosion proof extraction ventilation is recommended. Flammable vapours may accumulate in poorly ventilated or confined areas. Vapours are heavier than air and may travel some

distance to an ignition source and flash back. Maintain vapour levels below the recommended exposure standards.

Personal Protection Equipment

No personal protective equipment is required, normally. When an inhalation risk exists wear a Type A-Class P1 (Organic vapour and Particulate) Respirator. With prolonged use, wear PVC or rubber gloves and splash-proof goggles or safety glasses.


Eye and Face Protection

No special equipment for minor exposure i.e. when handling small quantities.

OTHERWISE: For potentially moderate or heavy exposure:

Safety glasses with side shields.

NOTE: Contact lenses pose a special hazard; soft lenses may absorb irritants, and ALL lenses concentrate them.

Safety glasses with side shields

Chemical goggles

Contact lenses may pose a special hazard; soft contacts lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.

Skin Protection

See Hand Protection below

Hand/Feet Protection

NOTE:

The material may produce skin sensitisation in predisposed individuals.

OTHERWISE:

None.

Body Protection

See Other Protection below

Other

No special equipment needed when handling small quantities.

OTHERWISE:

Overalls

Skin cleansing cream

Eyewash unit

The clothing worn by process operators insulated from earth may develop static charges far higher (up to 100 times) than the minimum ignition energies for various flammable gas-air mixtures. This holds true for a wide range of materials including cotton.

Avoid dangerous levels of charge by ensuring a low resistivity of the surface material worn outermost

Respiratory Protection

Type A-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent). Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator |
|------------------------------------|----------------------|----------------------|-------------------------|
| up to 10 x ES | A-AUS P2 | - | A-PAPR-AUS / Class 1 P2 |
| up to 50 x ES | - | A-AUS / Class 1 P2 | - |
| up to 100 x ES | - | A-2 P2 | A-PAPR-2 P2 ^ |



9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|--------------------|------------------------|---------------------------|-------------------------------|
| Appearance | COLOURLESS LIQUID | Vapour Pressure | 240 KPa (ROOM TEMPERATURE) |
| Odour | CHARACTERISTIC SOLVENT | Upper Explosion Limit | NOT AVAILABLE |
| Flammability | EXTREMELY FLAMMABLE | Lower Explosion Limit | NOT AVAILABLE |
| Flash Point | <10 °C | Partition Coefficient | 54 °C |
| Boiling Point | NOT AVAILABLE | Autoignition Temperature | NOT AVAILABLE |
| Melting Point | NOT AVAILABLE | Decomposition Temperature | NOT AVAILABLE |
| Evaporation Rate | NOT AVAILABLE | Viscosity | NOT AVAILABLE |
| pH | NOT AVAILABLE | Explosive Properties | NOT AVAILABLE |
| Vapour Density | 2.046 | Oxidising Properties | NOT AVAILABLE |
| Relative Density | NOT AVAILABLE | Odour Threshold | NOT AVAILABLE |
| Solubility (water) | IMMISCIBLE | | |

10. STABILITY AND REACTIVITY

| | |
|------------------------------------|---|
| Reactivity | Avoid reaction with oxidising agents |
| Chemical stability | Stable under normal storage conditions |
| Possibility of Hazardous reactions | Polymerisation is not expected to occur |
| Conditions to avoid | Avoid heat, sparks, open flames and all sources of ignition |
| Incompatible materials | Incompatible with oxidising agents, acids, alkalis, heat and ignition |
| Decomposition Products | May evolve toxic gases (carbon oxides, hydrocarbons) when heated to decomposition temperatures. |

11. TOXICOLOGICAL INFORMATION

information on toxicological effects

Acute Toxicity

| Product/Ingredient Name | Result | Species | Dose | Exposure |
|-------------------------|------------------------|---------|--------------------------|----------|
| ethanol | LC50 Inhalation Vapour | Rat | 124700 mg/m ³ | 4 hours |
| | LD50 Oral | Rat | 7 g/kg | - |
| Butane | LC50 Inhalation Vapour | Rat | 658000 mg/m ³ | 4 hours |
| N,N-diethyl-m-toluamide | LC50 Inhalation Vapour | Rat | >5.95 mg/l | 4 hours |
| | LD50 Dermal | Rabbit | 3180 mg/kg | - |
| | LD50 Dermal | Rat | 5 g/kg | - |
| | LD50 Oral | Rat | 1800 mg/kg | - |
| | LD50 Oral | Rat | 1892 mg/kg | - |

Conclusion/Summary Based on available data, the classification criteria are not met.

**Irritation/Corrosion**

| Product/Ingredient Name | Result | Species | Score | Exposure | Observation |
|-------------------------|--------------------------|---------|-------|--------------------------------------|-------------|
| ethanol | Eyes – Moderate irritant | Rabbit | - | 0.06666667 minutes 100 milligrams | - |
| | Eyes – Mild irritant | Rabbit | - | 24 hours 500 milligrams | - |
| | Eyes – Moderate irritant | Rabbit | - | 100 microlitres | - |
| | Eyes – Severe irritant | Rabbit | - | 500 milligrams | - |
| | Skin – Mild irritant | Rabbit | - | 400 milligrams | - |
| | Skin – Moderate irritant | Rabbit | - | 24 hours 20 milligrams | - |
| N,N-diethyl-m-toluamide | Skin – Irritant | Rabbit | - | - | - |
| | Eyes – Irritant | Rabbit | - | - | - |
| | Eyes – Irritant | Rabbit | - | 10 milligrams | - |
| | Skin – Moderate irritant | Rabbit | - | 500 milligrams | - |

Conclusion/Summary**Skin**

Non-irritant to skin. Information is based on toxicity test result of a similar product.

Eyes

Based on Calculation method: Causes serious eye irritation.

Respiratory

Based on available data, the classification criteria are not met.

Sensitisation

| Product/Ingredient Name | Route of Exposure | Species | Result |
|-------------------------|-------------------|------------------------------|-----------------|
| N,N-diethyl-m-toluamide | Skin | Mammal – Species unspecified | Not sensitizing |

Conclusion/Summary**Skin**

Based on available data, the classification criteria are not met.

Respiratory

Based on available data, the classification criteria are not met.

Mutagenicity

Not available.

Conclusion/Summary

Based on available data, the classification criteria are not met.

Carcinogenicity

Not available.

Conclusion/Summary

Based on available data, the classification criteria are not met.

Reproductive toxicity

Not available.

Conclusion/Summary

Based on available data, the classification criteria are not met.

Teratogenicity

Not available.

Conclusion/Summary

Based on available data, the classification criteria are not met.



Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure

Not available.

Potential acute health effects

| | |
|---------------------|---|
| Eye contact | Causes serious eye irritation. |
| Inhalation | No known significant effects or critical hazards. |
| Skin contact | No known significant effects or critical hazards. |
| Ingestion | No known significant effects or critical hazards. |

Symptoms related to the physical, chemical and toxicological characteristics

| | |
|---------------------|--|
| Eye contact | Adverse symptoms may include the following: pain or irritation watering redness |
| Inhalation | Adverse symptoms may include the following: respiratory tract irritation coughing |
| Skin contact | No specific data. |
| Ingestion | No specific data. |

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Short term exposure**

| | |
|------------------------------------|----------------|
| Potential immediate effects | Not available. |
| Potential delayed effects | Not available. |

Long term exposure

| | |
|------------------------------------|----------------|
| Potential immediate effects | Not available. |
| Potential delayed effects | Not available. |

Potential chronic health effects

Not available.

Conclusion/Summary

Based on available data, the classification criteria are not met.

General

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.



| | |
|----------------------------|---|
| Mutagenicity | No known significant effects or critical hazards. |
| Teratogenicity | No known significant effects or critical hazards. |
| Development effects | No known significant effects or critical hazards. |
| Fertility effects | No known significant effects or critical hazards. |

Numerical measures of toxicity

Acute toxicity estimates

| Route | ATE Value |
|--------|---------------|
| Oral | 9424 mg/kg |
| Dermal | 10585.3 mg/kg |

12. ECOLOGICAL INFORMATION

Toxicity Contains a substance that is toxic to aquatic organisms

| Product/Ingredient Name | Result | Species | Exposure |
|-------------------------|--------------------------------------|--|----------|
| ethanol | Acute EC50 17.921 mg/l Marine water | Algae – Ulva pertusa | 96 hours |
| | Acute EC50 2000 µg/l Fresh water | Daphnia – Daphnia magna | 48 hours |
| | Acute LC50 25500 µg/l Marine water | Crustaceans – Artemia franciscana – Larvae | 48 hours |
| | Acute LC50 42000 µg/l Fresh water | Fish – Oncorhynchus mykiss | 4 days |
| | Chronic NOEC 4.995 mg/l Marine water | Algae – Ulva pertusa | 96 hours |
| | Chronic NOEC 100 µl/L Fresh water | Daphnia – Daphnia magna – Neonate | 21 days |
| N,N-diethyl-m-toluamide | Acute EC50 75 ppm Fresh water | Daphnia – Daphnia magna | 48 hours |
| | Acute IC50 43 mg/l | Algae | 96 hours |
| | Acute LC50 110 mg/l | Fish – minnow | 96 hours |
| | Acute LC50 71.25 ppm Fresh water | Fish – Oncorhynchus mykiss | 96 hours |

Persistence and degradability No information provided

Flammability No information provided

Bioaccumulative potential

| Product/Ingredient Name | LogP _{ow} | BCF | Potential |
|-------------------------|--------------------|-----|-----------|
| ethanol | -0.35 | - | low |
| Butane | 2.89 | - | low |
| N,N-diethyl-m-toluamide | 2.18 | 2.4 | low |
| Propane | 1.09 | - | low |

Mobility in Soil No information provided

Other adverse effects No known significant effects or critical hazards

13. DISPOSAL CONSIDERATIONS

Waste Disposal For small amounts, absorb contents with sand or similar and dispose of to an approved landfill site. DO NOT puncture or incinerate aerosol cans. Contact the manufacturer for additional information.

Legislation Dispose of in accordance with relevant, local legislation.

14. TRANSPORT INFORMATION

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG AND HZNO CODES.

| | Shipping Name | UN No | Packing Group | DG Class | Subsidiary Risk(s) | EPG |
|----------------------------------|---------------|-------|----------------|----------|--------------------|-----|
| LAND TRANSPORT (HZNO) | AEROSOLS | 1950 | None Allocated | 2.1 | None Allocated | |
| SEA TRANSPORT (IMDG/IMO) | AEROSOLS | 1950 | III | 2.1 | None Allocated | |
| AIR TRANSPORT (IATA/ICAO) | AEROSOLS | 1950 | None Allocated | 2.1 | None Allocated | |

Special precautions for user **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage

Shipping Label



Marine Pollutant



Special Precautions Hazchem code: 2Y

15. REGULATORY INFORMATION

Poison Schedule AICS A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP). All chemicals listed on the Australian Inventory of Chemical Substances (AICS).

MPI None.



NZEPA Approved pursuant to the HSNO Act 1996,
Approval No. HSR02552; Cosmetics product

Approved Handler No.

Requirement

Tracking Requirement No.

16. OTHER INFORMATION

Additional Information ASPHYXIANTS (1): reduce the oxygen concentration by displacement, when present in the atmospheres, in high concentrations. As most simple asphyxiants are odourless, atmospheres deficient in oxygen do not provide adequate sensory warning of danger. Therefore, it is not generally appropriate to recommend an exposure standard for each asphyxiant, but instead warn of the need to maintain oxygen concentrations.

Some asphyxiants may be given an exposure standard, due to their potential for narcotic effects at high concentrations, or an explosion hazard.

Asphyxiants (2) There is a significant hazard associated with workers entering poorly, ventilated areas (e.g. tanks) where oxygen levels may be deficient. An air supplied breathing apparatus may be required if adequate ventilation is not ensured. Refer to AS/NZS 2865 - Safe Working in a Confined Space.

Respirators In general, the best practice to avoid exposure is to use engineering controls, such as adequate ventilation, rather than the use of respirators (which should be limited). If respiratory equipment must be worn, ensure correct respirator selection and training is undertaken. Some respirators may be extremely uncomfortable, when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

Abbreviations Mg/m³ - Milligrams per cubic metre
ppm - Parts Per Million
M - moles per litre, a unit of measure of concentration.
pH - relates to hydrogen ion concentration - this value will relate to a scale of 0 - 14, where 0 is highly acidic and 14 is highly alkaline.
TWA/ES - Time Weighted Average or Exposure Standard.
CAS# - Chemical Abstract Service number - uniquely identifies chemical compounds.
CNS - Central Nervous System
NOS - Not Otherwise Specified
IARC - International Agency for Research on Cancer.

Personal Protective Equipment The recommendations for protective equipment contained within this SDS report are provided as a guide only, when dealing with an abnormal situation. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before the final selection of personal protective equipment is made.

Health Effects from Exposure It should be noted that the effects from excess exposure to this product would depend on several factors, including duration of exposure, quantity involved, effectiveness of control



SAFETY DATA SHEET

MAC BUZZ OFF INSECT REPELLENT AEROSOL

Personal Insect Repellent

measures used; protective equipment and method of application. Given that, it is impractical to prepare an SDS report, which would encompass all possible scenarios, it is anticipated that users will assess the risks in an emergency and apply appropriate control methods.

Report Status

This report is based upon information provided by ingredient manufacturers, and third-party experts. We believe that the information represents the current state of knowledge about safety and handling precautions that are appropriate for this product. Further clarification regarding any aspect of the product should be obtained directly from the Chief Chemist at Arandee Ltd.

While Arandee has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy, or completeness. As far as lawfully possible, Arandee accepts no liability for any loss, injury, or damage (including consequential loss) which may be suffered, or incurred by any person, because of their reliance upon the information contained in this Safety Data Sheet.