

# SAFETY DATA SHEET

**Black Flag Odourless Fly & Mosquito Killer Aerosol**

## 1. Identification of the material and supplier

### Names

**Product name** : Black Flag Odourless Fly & Mosquito Killer Aerosol**SDS no.** : D0067111**Formulation #** : 0102281\_3 Odourless

**Supplier** :

AUSTRALIA  
 Reckitt Benckiser (Australia) Pty Limited  
 ABN: 17 003 274 655  
 44 Wharf Road, West Ryde NSW 2114  
 Tel: +61 (0)2 9857 2000

NEW ZEALAND  
 Reckitt Benckiser (New Zealand) Limited  
 2 Fred Thomas Drive,  
 Takapuna, Auckland 0622  
 Tel: +64 9 484 1400

**Manufacturer** : MALAYSIA  
 Reckitt Benckiser (Malaysia) Sdn Bhd  
 LOT PLO 141 Jalan Angkasa Mas Utama , Kawasan Perindustrian Tebrau 2  
 Mukim Tebrau, 81100 Johor Bahru  
 Johor, Malaysia  
 Tel: +607 353 4940/ 4941

**Emergency telephone number** : (5 pm - 8 am EST Australia): +61 (02) 9857 2444  
 NewZealand: (09) 484 1400

**Poison Information contact:** : Australia - 13 11 26  
 New Zealand - 0800 764 766 or 0800 POISON

**Material uses** : Household insecticide

## 2. Hazards identification

**Statement of hazardous/dangerous nature** : HAZARDOUS SUBSTANCE. DANGEROUS GOODS.**Classification** : F+; R12  
Xi; R38  
N; R51/53**Risk phrases** : R12- Extremely flammable.  
R38- Irritating to skin.  
R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Safety phrases** : S16- Keep away from sources of ignition - No smoking.  
 S23- Do not breathe spray.  
 S24- Avoid contact with skin.  
 S24/25- Avoid contact with skin and eyes.  
 S61- Avoid release to the environment. Refer to special instructions/safety data sheet.  
 S2- Keep out of the reach of children.  
 S46- If swallowed, seek medical advice immediately and show this container or label.

**Hazard symbol or symbols** :

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### 3. Composition/information on ingredients

**Mixture** : Yes.

Ingredient name	CAS number	Proportion % w/w
Butane	106-97-8	10 - < 30
Propane	74-98-6	< 10
Paraffins (petroleum), normal C5-20	64771-72-8	< 10
d-trans Allethrin 75:25 (Esbiothrin)	84030-86-4	< 1
Permethrin	52645-53-1	< 0.1
2,6-Di-tert-butyl-p-cresol	128-37-0	< 0.1

Supplier's information : Product contains less than 0.1% w/w 1, 3-Butadiene

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

### 4. First-aid measures

#### First-aid measures

- Inhalation** : Move exposed person to fresh air. Get medical attention if adverse health effects persist or are severe.
- Ingestion** : Call medical doctor or poison control centre immediately. Wash out mouth with water.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse.
- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
- Advice to doctor** : Treat symptomatically.

### 5. Fire-fighting measures

#### Extinguishing media

**Suitable** : Use an extinguishing agent suitable for the surrounding fire.

**Not suitable** : None known.

**Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. This material is very toxic to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

**Hazchem code** : 2YE

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## 6. Accidental release measures

**Personal precautions** : 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 hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

**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). Water polluting material. May be harmful to the environment if released in large quantities.

### Methods for cleaning up

**Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

**Large spill** : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

## 7. Handling and storage

**Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Pressurised container: protect from sunlight and do not expose to temperature exceeding 50°C. Do not pierce or burn, even after use. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Avoid breathing vapour or mist. Avoid release to the environment. Refer to special instructions/safety data sheet. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Empty containers retain product residue and can be hazardous.

**Storage** : Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

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## 8. Exposure controls/personal protection

### Australia

Ingredient name	Exposure limits
Butane	<b>Safe Work Australia (Australia, 8/2005).</b> TWA: 1900 mg/m <sup>3</sup> 8 hour(s). TWA: 800 ppm 8 hour(s).
Propane	<b>ACGIH TLV (United States, 2/2010).</b> TWA: 1000 ppm 8 hour(s).
2,6-Di-tert-butyl-p-cresol	<b>Safe Work Australia (Australia, 8/2005).</b> TWA: 10 mg/m <sup>3</sup> 8 hour(s).

### New Zealand

Ingredient name	Exposure limits
Butane	<b>NZ OSH (New Zealand, 12/2010).</b> WES-TWA: 800 ppm 8 hour(s). WES-TWA: 1900 mg/m <sup>3</sup> 8 hour(s).
Propane	<b>ACGIH TLV (United States, 2/2010).</b> TWA: 1000 ppm 8 hour(s).
Paraffins (petroleum), normal C5-20	<b>NZ OSH (New Zealand, 9/2010).</b> WES-TWA: 5 mg/m <sup>3</sup> 8 hour(s). WES-STEL: 10 mg/m <sup>3</sup> 15 minute(s).
2,6-Di-tert-butyl-p-cresol	<b>NZ OSH (New Zealand, 9/2010).</b> WES-TWA: 10 mg/m <sup>3</sup> 8 hour(s).

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

### Manufacturer: Exposure controls

- Engineering measures** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

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## 9. Physical and chemical properties

<b>Physical state</b>	: Liquid.
<b>Colour</b>	: Colourless.
<b>Odour</b>	: Not available.
<b>Melting point</b>	: Not available.
<b>Vapour pressure</b>	: 240 kPa (1800.15 mm Hg) [20°C] Butane
<b>Density</b>	: 0.96 g/cm <sup>3</sup> [25°C (77°F)Conc.]
<b>Flash point</b>	: Open cup: -60°C (-76°F) [Butane]
<b>Vapour density</b>	: Not available.
<b>pH</b>	: Not available.
<b>Viscosity</b>	: Not available.
<b>Solubility</b>	: Easily soluble in the following materials: cold water and hot water.
<b>Aerosol product</b>	
<b>Type of aerosol</b>	: Spray

## 10. Stability and reactivity

<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: Avoid all possible sources of ignition (spark or flame).
<b>Materials to avoid</b>	: Do not mix with Other Products
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 11. Toxicological information

### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Butane d-trans Allethrin 75:25 (Esbiothrin)	LC50 Inhalation Vapour	Rat	658000 mg/m <sup>3</sup>	4 hours
	LC50 Inhalation Vapour	Rat	2.63 mg/l	4 hours
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	378 to 432 mg/kg	-
Permethrin	LC50 Inhalation Dusts and mists	Rat	>685 mg/m <sup>3</sup>	3 hours
	LD50 Dermal	Rat	>2500 mg/kg	-
	LD50 Oral	Rat	6000 mg/kg	-

**Conclusion/Summary** : Not classified Harmful Information is based on toxicity test result of a similar product.

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
d-trans Allethrin 75:25 (Esbiothrin)	Eyes - Mild irritant	Rabbit	-	-	-
	Skin - Mild irritant	Rabbit	-	-	-
Permethrin	Eyes - Mild irritant	Rabbit	-	-	-
	Skin - Mild irritant	Rabbit	-	-	-

**Skin** : Irritating to skin. Information is based on toxicity test result of a similar product.

**Eyes** : Non-irritating to the eyes. Information is based on toxicity test result of a similar product.

**Respiratory** : Not available.

### Sensitiser

Product/ingredient name	Route of exposure	Species	Result

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## 11. Toxicological information

d-trans Allethrin 75:25 (Esbiothrin)	skin	Guinea pig	Not sensitizing
Permethrin	skin	Guinea pig	Sensitising

**Skin** : Non-sensitiser. Information is based on toxicity test result of a similar product.

**Respiratory** : Not available.

### Mutagenicity

**Conclusion/Summary** : Not available.

### Carcinogenicity

**Conclusion/Summary** : Not available.

### Reproductive toxicity

**Conclusion/Summary** : Not available.

### Teratogenicity

**Conclusion/Summary** : Not available.

### Potential acute health effects

**Inhalation** : No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards.

**Skin contact** : Irritating to skin.

**Eye contact** : No known significant effects or critical hazards.

### Potential chronic health effects

#### Chronic toxicity

**Conclusion/Summary** : Not available.

**Chronic effects** : 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.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

### Over-exposure signs/symptoms

**Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing

**Skin** : Adverse symptoms may include the following:  
irritation  
redness

**Eyes** : Adverse symptoms may include the following:  
irritation  
redness

## 12. Ecological information

**Ecotoxicity** : Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

### Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Mortein Fast Knockdown Fly & Mosquito Killer	Acute LC50 4.43 mg/l	Fish	96 hours
	Acute EC50 0.0089 mg/l	Daphnia	48 hours
d-trans Allethrin 75:25 (Esbiothrin)	Acute LC50 0.013 mg/l	Fish	96 hours
	Acute LC50 0.0006 mg/l	Daphnia	48 hours
	Acute LC50 0.0018 mg/l	Fish - bluegill sunfish	96 hours
	Acute LC50 0.0025 mg/l	Fish	96 hours
Permethrin			

**Conclusion/Summary** : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Information is based on toxicity test result of the product.

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## 12. Ecological information

### Other ecological information

#### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Butane	2.89	-	low
Propane	2.36	-	low
Permethrin	6.5	-	high

**Other adverse effects** : No known significant effects or critical hazards.

## 13. Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : Waste must be disposed of in accordance with federal, state and local environmental control regulations. Waste packaging should be recycled.







**Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC.

#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

## 14. Transport information

Regulation	UN number	Proper shipping name	Classes	PG*	Label	Additional information
<b>ADG</b>	UN1950	AEROSOLS	2.1	-	 	<b>Hazchem code</b> 2YE
<b>IMDG</b>	UN1950	AEROSOLS. Marine pollutant (d-trans Allethrin 75:25 (Esbiothrin))	2.1	-	 	<b>Emergency schedules (EmS)</b> F-D, S-U
<b>IATA</b>	UN1950	Aerosols, flammable	2.1	-	 	<b>Passenger and Cargo Aircraft</b> Quantity limitation: 75 kg Packaging instructions: 203 <b>Cargo Aircraft Only</b> Quantity limitation: 150 kg Packaging instructions: 203 <b>Limited Quantities - Passenger Aircraft</b> Quantity limitation: 30 kg Packaging instructions: Y203

PG\* : Packing group



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## 15. Regulatory information

### Standard for the Uniform Scheduling of Medicines and Poisons

Poison schedule (Australia) : Not scheduled

Australian Pesticides and  
Veterinary Medicines  
Authority (APVMA) : 60745

Australia inventory (AICS) : Not applicable

New Zealand Inventory of  
Chemicals (NZIoC) : Not applicable

HSNO Approval Number : HSR007755

Approved Handler  
Requirement : Yes.

Tracking Requirement : No.

## 16. Other information

**Abbreviations and  
acronyms** : ADG = Australian Code for the Transport of Dangerous Goods by Road and Rail  
HSNO = Hazardous Substances and New Organisms Act 1996 (New Zealand)  
IATA = International Air Transport Association  
IMDG = International Maritime Dangerous Goods  
N.O.S. = Not otherwise specified  
NOHSC = National Occupational Health and Safety Commission (Australia)

**Date of issue / Date of  
revision** : 07/09/2015

**Version** : 7

**Revision reason** : Add New Zealand Regulatory information.  
Update NZ new address & phone number.

### Disclaimer

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.