

SAFETY DATA SHEET



1. Identification

Product name : Mortein Fast Knockdown Fly & Mosquito Killer Odourless Aerosol
SDS no. : D0067111
Formulation # : FF0102281
Supplier : AUSTRALIA
RB (Hygiene Home) Australia Pty Ltd
680 George St , Sydney, NSW 2000
Tel: +61 (0)2 9857 2000

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

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

Uses

Product use : Household insecticide.
Consumer uses.

2. Hazard identification

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 1
SKIN CORROSION/IRRITATION - Category 2

GHS label elements

Hazard pictograms :



Signal word : **DANGER**
Hazard statements : **Extremely flammable aerosol.**
Causes skin irritation.

Precautionary statements

General : Keep out of reach of children. If medical advice is needed, have product container or label at hand.
Prevention : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Wash hands thoroughly after handling.
Response : Not applicable
Storage : Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	% (w/w)	CAS number
n-butane	≥10 - ≤30	106-97-8
propane	≥10 - ≤30	74-98-6
Isobutane	≥10 - ≤30	75-28-5
isopentane	≤3	78-78-4
permethrin (ISO)	≤0.1	52645-53-1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

The total concentration of ingredients in this product, reported or not in this section, is 100%.

Occupational exposure limits, if available, are listed in Section 8.

4. First-aid measures

Description of necessary first aid measures

- 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.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- 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. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : Toxic if inhaled.
- Skin contact** : Causes skin irritation.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
irritation
redness

4. First-aid measures

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

5. Fire-fighting measures

Extinguishing media

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

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Extremely flammable aerosol. Runoff to sewer may create fire or explosion hazard. 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. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : No specific data.

Special protective actions for fire-fighters : 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.

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 : Not applicable

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

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 hazard area. Do not breathe 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".

6. Accidental release measures

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. Collect spillage.

Methods and material for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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). 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.

See Section 1 for emergency contact information.

See Section 8 for information on appropriate personal protective equipment.

See Section 13 for additional waste treatment information.

7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Pressurised container: protect from sunlight and do not expose to temperature exceeding 50°C. Do not pierce or burn, even after use. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid breathing gas. Avoid release to the environment. 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 only non-sparking tools. Empty containers retain product residue and can be hazardous.

Advice on general occupational hygiene : 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. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Do not store above the following temperature 50 °C

8. Exposure controls/personal protection

Control parameters

Australia

Occupational exposure limits

8. Exposure controls/personal protection

Ingredient name	Exposure limits
Butane	Safe Work Australia (Australia, 1/2014). TWA: 1900 mg/m ³ 8 hours. TWA: 800 ppm 8 hours.

New Zealand

Occupational exposure limits

Ingredient name	Exposure limits
butane	NZ HSWA 2015 - GRWM 2016 (New Zealand, 2/2013). WES-TWA: 800 ppm 8 hours. WES-TWA: 1900 mg/m ³ 8 hours.
propane	NZ HSWA 2015 - GRWM 2016 (New Zealand, 11/2017). Oxygen Depletion [Asphyxiant].
ethane	NZ HSWA 2015 - GRWM 2016 (New Zealand, 11/2017). Oxygen Depletion [Asphyxiant].

Appropriate engineering controls : Use only with adequate ventilation. 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.

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.

Individual protection measures

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.

Eye/face protection : 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, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : 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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : 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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

8. Exposure controls/personal protection

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state	: Liquid. [Aerosol.]
Colour	: White
Odour	: Slightly paraffinic
Odour threshold	: Not available.
pH	: Not available.
Melting point/freezing point	: Not available.
Boiling point, initial boiling point, and boiling range	: Not available.
Flash point	: Open cup: -60°C (-76°F) [Butane]
Evaporation rate	: Not available.
Flammability	: Not available.
Lower and upper explosion limit/flammability limit	: Not available.
Vapour pressure	: 240 kPa (1800.15 mm Hg)
Relative vapour density	: Not available.
Relative density	: Not available.
Solubility(ies)	: Not available.
Partition coefficient: n-octanol/water	: Not applicable.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Heat of combustion	: 19.94 kJ/g
Viscosity	: Not available.
<u>Particle characteristics</u>	
Median particle size	: Not applicable.
<u>Aerosol product</u>	
Type of aerosol	: Spray

10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame).
Incompatible materials	: No specific data.

10. Stability and reactivity

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Black Flag Odourless_FF0102281_D0067111_ANZ	LC50 Inhalation Vapour	Rat - Male, Female	5.67 mg/l	4 hours
	LD50 Dermal	Rat - Male	>2000 mg/kg	-
	LD50 Oral	Rat - Male	>2000 mg/kg	-
n-butane	LC50 Inhalation Vapour	Rat	658000 mg/m ³	4 hours
Isobutane	LC50 Inhalation Vapour	Rat	658000 mg/m ³	4 hours
isopentane	LC50 Inhalation Vapour	Rat	280000 mg/m ³	4 hours
permethrin (ISO)	LC50 Inhalation Dusts and mists	Rat	>685 mg/m ³	3 hours
	LD50 Dermal	Rat	1750 mg/kg	-
	LD50 Dermal	Rat	>2500 mg/kg	-
	LD50 Oral	Rat	383 mg/kg	-
	LD50 Oral	Rat	6000 mg/kg	-

Conclusion/Summary Not classified. Information is based on toxicity test result of the concentrate of a similar product.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Black Flag Odourless_FF0102281_D0067111_ANZ	Eyes - Cornea opacity	Rabbit	0	-	48 hours
permethrin (ISO)	Skin - Moderate irritant	Rabbit	-	4 hours	14 days
	Eyes - Mild irritant	Rabbit	-	-	-
	Skin - Mild irritant	Rabbit	-	-	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-

Conclusion/Summary

Skin Causes skin irritation. Information is based on toxicity test result of the concentrate of a similar product.

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

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

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
Black Flag Odourless_FF0102281_D0067111_ANZ	skin	Rabbit	Not sensitizing
permethrin (ISO)	skin	Guinea pig	Sensitising

Conclusion/Summary

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

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

Germ Cell Mutagenicity

Not available.

Conclusion/Summary

No known significant effects or critical hazards.

Carcinogenicity

Not available.

Conclusion/Summary

No known significant effects or critical hazards.

Reproductive toxicity

11. Toxicological information

Not available.

Conclusion/Summary : No known significant effects or critical hazards.

Teratogenicity

Not available.

Conclusion/Summary : No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
isopentane	Category 3	-	Narcotic effects

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Name	Result
isopentane	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.
Inhalation : Toxic if inhaled.
Skin contact : Causes skin irritation.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.
Inhalation : No specific data.
Skin contact : Adverse symptoms may include the following:
 irritation
 redness
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.

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary : No known significant effects or critical hazards.
General : No known significant effects or critical hazards.
Carcinogenicity : No known significant effects or critical hazards.
Germ Cell Mutagenicity : No known significant effects or critical hazards.

11. Toxicological information

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

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Inhalation (vapours)	5.67 mg/l

12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
permethrin (ISO)	Acute EC50 68 µg/l Marine water	Algae - Skeletonema costatum - Exponential growth phase	96 hours
	Acute EC50 0.11 µg/l Fresh water	Crustaceans - Orconectes immunis	48 hours
	Acute EC50 0.151 ppb Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 0.0006 mg/l	Daphnia	48 hours
	Acute LC50 0.0025 mg/l	Fish	96 hours
	Acute LC50 0.62 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute LC50 0.0018 mg/l	Fish - bluegill sunfish	96 hours
	Chronic NOEC 0.039 ppb Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 0.3 ppb Fresh water	Fish - Pimephales promelas	246 days

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

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
n-butane	2.89	-	low
propane	1.09	-	low
Isobutane	2.8	-	low
isopentane	3	171	low
permethrin (ISO)	6.5	-	high

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

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

13. Disposal considerations








Disposal methods

The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its

13. Disposal considerations

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

	ADG	ADR/RID	IMDG	IATA
UN number	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS Marine Pollutant (Permethrin, Esbiothrin)	AEROSOLS Marine Pollutant (Permethrin, Esbiothrin)	AEROSOLS Marine Pollutant (Permethrin, Esbiothrin)	Aerosols, flammable Marine Pollutant (Permethrin, Esbiothrin)
Transport hazard class(es)	2  	2  	2.1  	2.1 
Packing group	III	III	III	III
Environmental hazards	Yes.	Yes.	Yes.	Yes.

Additional information

- ADG** : **Special provisions** 63, 190, 277, 327, 344, 381
- ADR/RID** : **Special provisions** 63, 190, 277, 327, 344
Tunnel code (D)
- IMDG** : **Emergency schedules** F-D, S-U
Special provisions 63, 190, 277, 327, 344, 381, 959
- IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.
Quantity limitation Passenger and Cargo Aircraft: 75 kg. Packaging instructions: 203. Cargo Aircraft Only: 150 kg. Packaging instructions: 203. Limited Quantities - Passenger Aircraft: 30 kg. Packaging instructions: Y203.
Special provisions A145, A167, A802

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.

Transport in bulk according to IMO instruments : Not available.

15. Regulatory information

Standard for the Uniform Scheduling of Medicines and Poisons

Not scheduled

Australian Inventory of Industrial Chemicals (AIIC) : All components are listed or exempted.

APVMA Number: 60745

New Zealand Inventory of Chemicals (NZIoC) : All components are listed or exempted.

HSNO Approval Number : HSR007755

Approved Handler Requirement : No.

Tracking Requirement : No.

16. Other information

Key to abbreviations : ADG = Australian Dangerous Goods
 ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
 IATA = International Air Transport Association
 IMDG = International Maritime Dangerous Goods
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IBC = Intermediate Bulk Container
 SUSMP = Standard Uniform Schedule of Medicine and Poisons
 UN = United Nations
 SWA = Safe Work Australia
 HSNO = Hazardous Substances and New Organisms Act 1996

Date of issue / Date of revision : 26/05/2023

Version : 2
 (Version for updated GHS Revision 7 PSDS Template)

Procedure used to derive the classification

Classification	Justification
FLAMMABLE AEROSOLS - Category 1 SKIN CORROSION/IRRITATION - Category 2	Expert judgment On basis of test data

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

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.

Please read all labels carefully before using product.