



SAFETY DATA SHEET

KNOCKOUT™ Room and Area Fogger

1. IDENTIFICATION

Product Name	KNOCKOUT™ Room and Area Fogger
Recommended use of the chemical and restrictions on use	
Identified uses	Insecticide spray for residential use
Restrictions on Use	For use only when building has been vacated by humans and pets. Do not use in small enclosed spaces. It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
Company Identification	Virbac AH, Inc. P.O. Box 162059 Fort Worth, Texas 76161 (800) 338-3659
Customer Information Number	
Emergency Telephone Number	
Chemtrec Number	(800) 424-9300
Other Emergency Number:	Poison Control Center: 1-800-222-1222 (human) HOT LINE NUMBER: 1-800-338-3659 (human and pet)
Issue Date	December 19, 2016
Supersedes Date	September 24, 2010

Safety Data Sheet prepared in accordance with OSHA's Hazard Communication Standard (29 CFR 1910.1200) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

2. HAZARD IDENTIFICATION

Hazard Classification
Flammable Aerosols - Category 1
Carcinogenicity - Category 2
Acute hazard to the aquatic environment - Category 2 (This classification not adopted by OSHA)

Label Elements
Hazard Symbols



Signal Word: Danger

Hazard Statements
Extremely flammable aerosol.
Suspected of causing cancer.
Toxic to aquatic life.

Precautionary Statements

Prevention

Pressurized container: Do not pierce or burn, even after use.
Do not spray on an open flame or other ignition source.
Keep away from heat/sparks/open flame/hot surfaces. - No smoking.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear eye protection, face protection, protective clothing, and protective gloves.
Avoid release to the environment.



2. HAZARD IDENTIFICATION

Response

If exposed or concerned: Get medical advice or attention.
Collect spillage.

Storage

Store locked up.
Protect from sunlight.
Do not expose to temperatures exceeding 50 °C/122 °F.

Disposal

Dispose of contents/container in accordance with local regulation.

Other Hazards

Vapors are heavier than air and can cause suffocation by reducing available oxygen.
Use of a fogger in an enclosed space may cause the product to explode resulting in injury to people or damage to property.
See Section 15 for FIFRA label elements.

Specific Concentration Limits

The values listed below represent the percentages of ingredients of unknown toxicity.

Acute oral toxicity	30 - 40%
Acute dermal toxicity	30 - 40%
Acute inhalation toxicity	40 - 50%
Acute aquatic toxicity	40 - 50%

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms:

This product is a mixture.

Component Name	CAS Number	Concentration
Isobutane	75-28-5	15 - 25%
Propane	74-98-6	10 - 20%
Hydrotreated light petroleum distillates	64742-47-8	5 - 10%
Permethrin	52645-53-1	0.4%
N-octyl bicycloheptene dicarboximide	113-48-4	0.4%
Pyriproxyfen	95737-68-1	0.2%
Pyrethrins	8003-34-7	0.05%

4. FIRST-AID MEASURES

Description of necessary first-aid measures

Eyes

Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing the eye. Call a poison control center or doctor for treatment advice.

Skin

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Ingestion

Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.



4. FIRST-AID MEASURES

Inhalation

Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Most important symptoms/effects, acute and delayed

Aside from the information found under Description of necessary first aid measures (above) and Indication of immediate medical attention and special treatment needed, no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed

Notes to Physicians

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Water spray, carbon dioxide and dry chemical. Use extinguishing media appropriate for surrounding materials.

Unusual Fire and Explosion Hazards

Can release hazardous vapors during a fire.

Protective Equipment for Fire-Fighting

Wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear appropriate protective clothing.

Environmental Precautions

Prevent the material from entering drains or watercourses.

Methods and materials for containment and cleaning up

Contain and absorb using earth, sand or other inert material. Transfer into suitable containers for recovery or disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Do not puncture, incinerate or place aerosol product containers in compactors. Use in well ventilated area. Use local exhaust ventilation. Avoid inhaling vapor or spray. Avoid contact with eyes, skin and clothing. Keep container tightly closed when not in use. Do not flame cut, braze or use welding torch on container.

Conditions for safe storage

Store away from sources of heat or ignition. Storage area should be: cool - dry - well ventilated - away from incompatible materials - out of direct sunlight - away from sources of ignition (heat, sparks, flames, and pilot lights) Do not store above 130°F.



8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Propane

ACGIH: See ACGIH Appendix F: Minimal Oxygen Content.

OSHA: PEL 1000 ppm (1800 mg/m³) 8h TWA.

Isobutane as Butane, all isomers

ACGIH: 1000 pm 15 min STEL

Hydrotreated light petroleum distillates

Supplier recommended limit: 100 ppm (525 mg/m³) 8h TWA (Petroleum Distillate – Stoddard Solvent)

Pyrethins

ACGIH: TLV 5 mg/m³ 8h TWA

OSHA: PEL 5 mg/m³ 8h TWA

Appropriate engineering controls

Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust), and control of process conditions.

Individual protection measures

Respiratory Protection

Respiratory protection if there is a risk of exposure. 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 Protection

Chemical resistant gloves.

Eye/Face Protection

Safety glasses or goggles.

Body Protection

Waterproof apron.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

	Physical State	Liquid
	Color	Opaque
Odor		Solvent/insecticidal
Odor Threshold		No data available
pH		No data available
Specific Gravity		1.0
Boiling Range/Point (°C/F)		>93.3/200
Melting Point (°C/F)		Not applicable
Flash Point (PMCC) (°C/F)		No data available
Vapor Pressure		Not applicable
Evaporation Rate (BuAc=1)		Not applicable
Solubility in Water		Miscible
Vapor Density (Air = 1)		Not applicable
VOC		Not applicable
Partition coefficient (n-octanol/water)		Not applicable
Viscosity		Not applicable
Auto-ignition Temperature		No data available
Decomposition Temperature		No data available



9. PHYSICAL AND CHEMICAL PROPERTIES

Upper explosive limit	No data available
Lower explosive limit	No data available
Flammability (solid, gas)	No data available

10. STABILITY AND REACTIVITY

Reactivity

Data is not available

Chemical Stability

Stable under normal conditions.

Possibility of hazardous reactions

Hazardous polymerization will not occur.

Conditions to Avoid

Heat – temperatures above 130°F

Incompatible Materials

Oxidizers – strong acids and bases

Hazardous Decomposition Products

Oxides of carbon – volatile hydrocarbon vapors – hydrogen chloride

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Hydrotreated light petroleum distillates

Oral LD50 (rat) >5000 mg/kg

Pyriproxyfen

Oral LD50 (rat) >5000 mg/kg

Dermal LD50 (rabbit) >2000 mg/kg

Inhalation LC50 (rat) >1.3 mg/l 4 hr

Pyrethrins

Oral LD50 (rat, male) 1400 mg/kg,

Dermal LD50 (rabbit) >2000 mg/kg

Inhalation LC50 (rat) >3.4 mg/l

N-octyl bicycloheptene dicarboximide

Dermal LD50 (rabbit) >2000 mg/kg

Permethrin

Oral LD50 (rat, female) 2280 mg/kg

Dermal LD50 (rabbit) >2000 mg/kg

Specific Target Organ Toxicity (STOT) – single exposure

Pyriproxyfen: Subchronic oral toxicity studies conducted with Pyriproxyfen Technical in the rat, mouse and dog indicate a low level of toxicity. The NOELs from these studies were 1000 ppm (149.4 mg/kg/day) in mice, 100 mg/kg/day in dogs and 400 ppm (23.5 mg/kg/day) in rats.

Permethrin: Acute Neurotoxicity Study in Rats: LOAEL = 75 mg/kg/day based on observations of clinical signs (i.e. aggression, abnormal and/or decreased movement) and increased body temperature (EPA) A NOAEL for neurotoxicity was established at 15 mg/kg per day. (UK-VMD)



11. TOXICOLOGICAL INFORMATION

Specific Target Organ Toxicity (STOT) – repeat exposure

Pyriproxyfen: No significant systemic toxicity was observed in either the 21-day dermal toxicity study in rats or the 28-day inhalation toxicity study in rats. Subchronic and chronic toxicity studies in mice, rats and dogs indicate that the liver and kidney are the principal target organs with slight anemia occurring in the rodent species.

Pyrethrins: In laboratory animal studies to determine the lowest observed adverse effect levels, effects seen included nervous system, thyroid and liver effects. Following inhalation exposure, neuro-behavioral effects we observed initially and respiratory tract lesions were observed at all dose levels. (EPA)

Permethrin: 15-Day Inhalation Study in Rats LOAEL = 0.583 mg/l (converts to oral equivalent of 154 mg/kg/day) based on body tremors and hypersensitivity to noise. (EPA). A neurotoxicity study in rats showed dose-related responses. At doses greater than 1500 ppm animals displayed tremors, splayed hind legs and staggered gait. Deaths were observed at 4000 ppm. A NOAEL of 750 ppm was established. (UK-VMD)

N-octyl bicycloheptene dicarboximide: In inhalation exposure in laboratory animals adverse effects to the respiratory tract have been observed. (EPA)

Serious Eye damage/Irritation

Pyriproxyfen: Eye irritation reversible within 7 days (Category III - EPA)

Skin Corrosion/Irritation

Pyriproxyfen: Mild or slight skin irritation at 72 hours. (Category IV - EPA)

Permethrin: Moderate eye irritation (rabbit).(EPA)

Pyrethrins: Mild or slight skin irritant over 72 hours (EPA)

Respiratory or Skin Sensitization

Pyriproxyfen: Non-sensitizing (guinea pig).

N-octyl bicycloheptene dicarboximide: Dermal sensitization testing was positive (guinea pig).

Pyrethrins: Not a dermal sensitizer (EPA report).

Carcinogenicity

Permethrin: EPA Classification: Likely to be Carcinogenic to Humans (by oral route) based on two reproducible benign tumor types (lung and liver) in the mouse, equivocal evidence of carcinogenicity in Long Evans rats, and supporting structural activity relationships (SAR) information.

Pyriproxyfen: There was no evidence of carcinogenicity in either a 78-week mouse feeding study or in the 2-year rat chronic/carcinogenicity study. Pyriproxyfen is classified as a “Group E” chemical - no evidence of carcinogenicity to humans.

N-octyl bicycloheptene dicarboximide: EPA Classification: Group C-possible human carcinogen with no cancer quantification

Pyrethrins: Classified by EPA as “Suggestive Evidence of Carcinogenicity, but Not Sufficient to Assess Human Carcinogenic Potential” with no cancer quantification

Germ Cell Mutagenicity

N-octyl bicycloheptene dicarboximide: Negative in the CHO chromosome aberration assay.

Reproductive Toxicity

Pyriproxyfen: There was no evidence of increased susceptibility to rat and rabbit fetuses in prenatal developmental toxicity studies or to rat offspring in the 2-generation rat reproduction study. No evidence of developmental toxicity was seen in special studies that evaluated pyriproxyfen toxicity following perinatal and prenatal exposure in rats.



11. TOXICOLOGICAL INFORMATION

N-octyl bicycloheptene dicarboximide The rat and rabbit developmental toxicity studies did not demonstrate developmental toxicity. There were no effects on the reproductive performance of either males or females in the multi-generation reproduction study. (EPA)

Aspiration Hazard

Not an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Permethrin

LC50 Bluegill sunfish 0.79 ppb 48 hr

EC50 Hexagenia bilineata 0.1 ppb 48hr

Pyriproxyfen: Moderately to highly toxic to fish and moderately to very highly toxic to aquatic invertebrate species.

Pyrethrins

LC50 rainbow trout 5.1 µg/l 96 h

Mobility in soil

No relevant studies identified.

Persistence/Degradability

No relevant studies identified.

Bioaccumulative Potential

No relevant studies identified.

Other adverse effects

No relevant studies identified.

13. DISPOSAL CONSIDERATIONS

Product Disposal and Container Handling: Do not puncture or incinerate. If empty: Place in trash or offer for recycling, if available. If partly filled: Call your local solid waste agency for disposal instructions.

14. TRANSPORT INFORMATION

Contact supplier for transport information.

15. REGULATORY INFORMATION

United States TSCA Inventory

This product is excluded from TSCA as it is regulated under FIFRA Section 3(2)(B)(ii) when used as a pesticide.



15. REGULATORY INFORMATION

Federal Insecticide, Fungicide, and Rodenticide Act

This is a pesticide product registered by the Environmental Protection Agency and is subject to certain labelling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals.

Following is the hazard information as required on the pesticide label:

Front Panel:

For Residential Use

KEEP OUT OF REACH OF CHILDREN

CAUTION

SEE SIDE/BACK PANEL FOR

ADDITIONAL PRECAUTIONARY STATEMENTS

Side/Back Panel:

READ ENTIRE LABEL BEFORE EACH USE

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS

CAUTION

HAZARDS TO HUMANS: Harmful if absorbed through the skin. Avoid contact with skin or clothing.

Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1 800 345 4735 for emergency medical treatment information.

PHYSICAL AND CHEMICAL HAZARDS

Contents under pressure. Keep away from heat, sparks and open flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting. (PICTURE OF FLAME) Highly Flammable Ingredient Ingrediente Altamente Inflamable

DIRECTIONS FOR USE (see label for complete instructions)

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Does not control bed bugs.

For use only when building has been vacated by humans and pets. Ventilate treated area for two (2) hours before re-entry. DO NOT use more than one fogger per room. DO NOT use in small enclosed spaces such as closets, cabinets or under counters or tables. Use of a fogger in an enclosed space may cause the product to explode resulting in injury to people or damage to property.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

Pesticide Storage: Store in a cool dry place inaccessible to children and away from heat and open flame. Store away from food and pet food.

Pesticide Disposal and Container Handling: Do not puncture or incinerate. **If empty:** Place in trash or offer for recycling, if available. **If partly filled:** Call your local solid waste agency for disposal instructions.

Canada DSL Inventory

This product is excluded from the DSL listing as it is regulated under the Pest Control Products Act when used as a pesticide.

SARA Title III Sect. 311/312 Categorization

Flammable (aerosol), Carcinogenicity

SARA Title III Sect. 313

The following chemicals are listed in Section 313 at or above de minimis concentrations: None



16. OTHER INFORMATION

Legend

ACGIH: American Conference of Governmental Industrial Hygienists
BOD: Biological Oxygen Demand
CAS#: Chemical Abstracts Service Number
DSL: Domestic Substances List
ECHA: European Chemicals Agency
EPA: Environmental Protection Agency
FIFRA: Federal Insecticide, Fungicide and Rodenticide Act
HDT: Highest Dose Tested
HMIS: Hazardous Materials Identification System IARC: International Agency for Research on Cancer
LC50: Lethal Concentration 50%
LD50: L LOEL: Lowest Observed Effect Level
N/A: Denotes no applicable information found or available
NFPA: National Fire Protection Association
NOEL: No Observed Effect Level
OSHA: Occupational Safety and Health Administration
PEL: Permissible Exposure Limit
Lethal Dose 50%
TSCA: Toxic Substances Control Act
SARA: Superfund Amendments and Reauthorization Act
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit
WHMIS: Workplace Hazardous Materials Information System
TLV: Threshold Limit Value
TSCA: Toxic Substance Control Act
UK-VMD: United Kingdom Veterinary Medicines Directorate

Revision Date: December 19, 2016
Replaces: September 24, 2010
Changes made: Updated to GHS classification.

Information Source and References

This SDS is prepared by Hazard Communication Specialists based on information provided by internal company references.

Prepared By: EnviroNet LLC.

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