

MATERIAL SAFETY DATA SHEET
ThermaCELL® Mosquito Repellent MATS
EPA Reg. No. 71910-2
The Schawbel Corp., 26 Crosby Drive, Bedford, MA 01730
781-541-6900

Safety Data Sheet dated 11/22/2009, version 3
Supersedes 9/5/2006 and 04/26/2007 versions

1. IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY

Trade names: ThermaCELL Mosquito Repellent (appliance), ThermaCELL Mosquito Repellent Lantern, ThermaCELL Mosquito Repellent Patio Lantern, ThermaCELL Compact Mosquito Repellent (Compact appliance), ThermaCELL Mini Mosquito Repellent Lantern, ThermaCELL Mosquito Replent Outdoor Lantern and ThermaCELL Mosquito Repellent Refills

Trade code: ZSDS10155

Product type and use: Solid insecticide

Manufacturer: ZOBELE INDUSTRIE CHIMICHE
Via Fersina 4
38100 - Trento (Italy)

Emergency telephone number of the company and/or of an authorised advisory centre:
ZOBELE INDUSTRIE CHIMICHE - Phone n.0461/303700

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components within the meaning of EEC directive 67/548 and corresponding classification:
22 % d-Allethrin;(Pynamin forte); (RS)-3-allyl-2-methyl-4-oxocyclopent-2-enyl (1RS,3RS;1RS,3SR)-2,2-dimethyl-3-(2-methylprop-1-enyl)cyclopropanecarboxylate
N.67/548/CEE: 006-025-00-3 CAS: 584-79-2 EINECS: 209-542-4
N Xn R20/22 R50/53

8.4 % Isopar M; Distillates (petroleum), hydrotreated light
N.67/548/CEE: 649-422-00-2 CAS: 64742-47-8 EINECS: 265-149-8 Xn
R65 R66

3. HAZARDS IDENTIFICATION

This pesticide is highly toxic to fish. Do not apply directly to water. Drift from treated areas may be hazardous to organisms in adjacent aquatic sites. Harmful if inhaled.

4. FIRST AID MEASURES

Contact with skin:
Wash with plenty of water and soap.

Contact with eyes:
Wash immediately with water for at least 10 minutes.

Swallowing:
Induce vomiting. SEEK A MEDICAL EXAMINATION IMMEDIATELY and present the safety-data sheet. A suspension of activated charcoal in water, or liquid paraffin may be administered.

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. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

5. FIRE-FIGHTING MEASURES

Recommended extinguishers:
Water, CO2, Foam, Chemical powders, according to the materials involved in the fire.

Extinguishers not to be used:
None in particular.

Risks arising from combustion:
Avoid inhaling the fumes.

Protective equipment:
Use protection for the respiratory tract.

6. ACCIDENTAL RELEASE MEASURES

Measures for personal safety:
Use gloves and protective clothing.

Environmental measures:
Limit leakages with earth or sand.
If the product has escaped into a water course, into the drainage system, or has contaminated the ground or vegetation, notify the competent authorities.

Cleaning methods:
If the product is in a liquid form, stop it from entering the drainage system.

Recover the product for re-use if possible, or for elimination. The product might, where appropriate, be absorbed by inert material.

After the product has been recovered, rinse the area and materials involved with water.

7. HANDLING AND STORAGE

Handling precautions:

Avoid contact and inhalation of the vapours. See, too, paragraph 8 below.

Do not eat or drink while working.

Incompatible materials:

None in particular.

Storage conditions:

Store unused mats in original packaging in a cool, dry place inaccessible to children and pets. Store units in a cool, dry place away from sources of heat. Do not contaminate water, food or feed by storage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Precautionary measures:

Give adequate ventilation to the premises where the product is stored and/or handled.

Respiratory protection:

Not needed for normal use. This product is only for outdoor use.

Protection for hands:

Not needed for normal use.

Eye protection:

Not needed for normal use.

Protection for skin:

No special precaution must be adopted for normal use.

Exposure limit(s) (ACGIH):

None.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and color:	Blue cardboard impregnated insecticide mat weighing 0.08 oz. each
Odor:	Characteristic
pH:	Not applicable
Melting point:	Not applicable
Boiling point:	Not applicable
Flash point:	Not applicable
Solid/gas flammability:	Not applicable
Autoignition temperature:	Not applicable
Explosive properties:	Not applicable
Oxidizing properties:	Not applicable
Vapor pressure:	Not applicable
Relative density:	Not applicable
Solubility in water:	Partially miscible
Lipid solubility:	Partially miscible
Partition c. (n-octanol/H ₂ O):	Not applicable
Vapor density:	Not applicable

10. STABILITY AND REACTIVITY

Conditions to avoid: Stable under normal conditions.

Substances to avoid: None in particular.

Hazardous decomposition products: None.

11. TOXICOLOGICAL INFORMATION

The concentration of each substance should be borne in mind in assessing the toxicological effects deriving from the preparation.

Set out below is the toxicological information relating to the main substances in the preparation.

THERMACELL MOSQUITO REPELLENT MATS

LD50 (RABBIT) ORAL: 4290 MG/KG

d-Allethrin;(Pynamin forte); (RS)-3-allyl-2-methyl-4-oxocyclopent-2-enyl (1RS,3RS;1RS,3SR)-2,2-dimethyl-3-(2-methylprop-1-enyl)cyclopropanecarboxylate

LD50 (RABBIT) ORAL: 4290 MG/KG

12. ECOLOGICAL INFORMATION

Adopt good working practices, so that the product is not released into the environment.

List of substances dangerous for the environment and corresponding classification:

20% - 25% d-Allethrin;(Pynamin forte); (RS)-3-allyl-2-methyl-4-oxocyclopent-2-enyl (1RS,3RS;1RS,3SR)-2,2-dimethyl-3-(2-methylprop-1-enyl)cyclopropanecarboxylate

N.67/548/CEE: 006-025-00-3 CAS: 584-79-2 EINECS: 209-542-4

R50/53 Highly toxic to fish. Drift from treated areas may be hazardous to aquatic organisms in adjacent sites.

13. DISPOSAL CONSIDERATIONS

Do not contaminate water, food or feed by disposal.

Large amounts: Recover if possible. In so doing, comply with the local and national regulations currently in force.

Small amounts: Do not reuse empty packaging; place in trash or offer for recycling if available. For unused mats, call your local solid waste agency for disposal instructions. Never place unused mats down any indoor or outdoor drain.

14. TRANSPORT INFORMATION

ADR-UN number: ADR-	3077
Class:	9
ADR-Shipping Name:	Environmentally hazardous substance, solid, N.O.S (d-Allethrin). Limited quantity
ADR-Packing Group:	III
IATA-Un number: IATA-	3077
Class: IATA-Technical	9
name: IATA-Packing	Environmentally hazardous substance, solid, N.O.S (d-Allethrin). Limited quantity
group: IMDG-Un	III
number: IMDG-Class:	3077
IMDG-Technical name:	9
IMDG-Packing group:	Environmentally hazardous substance, solid, N.O.S (d-Allethrin). Limited quantity
	III

15. REGULATORY INFORMATION

Council Directive 67/548/EEC (Classification, packaging and labelling of dangerous substances) and subsequent amendments. Commission Directive 1999/45/CE (Classification, packaging and labelling of dangerous preparation) and subsequent amendments. Commission Directive 2001/58/CE (Safety data sheets). Commission Directive 98/24/CE (Protection of the health and safety of workers from the risk related to chemical agent). Commission Directive 2000/39/CE (Occupational exposure limit values).



Symbols:

N Dangerous for the environment

R Phrases:

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S Phrases:

S60 This material and its container must be disposed of as hazardous waste.

S61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

S2 Keep out of reach of children.

Where applicable, refer to the following regulatory provisions :

Directive 2003/105/CE ('Activities linked to risks of serious accidents').

1999/13/EC (VOC directive)

16. OTHER INFORMATION

Text of R phrases referred to under heading 2:

R20/22 Harmful by inhalation and if swallowed.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R65 Harmful: may cause lung damage if swallowed.

R66 Repeated exposure may cause skin dryness or cracking.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

ACGIH - Threshold Limit Values - 1997 edition

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

MATERIAL SAFETY DATA SHEET
ThermaCELL® Mosquito Repellent C-15 CARTRIDGE
 EPA Reg. No. 71910-2
 The Schawbel Corp., 26 Crosby Drive, Bedford, MA 01730
 781-541-6900

Section I

Manufacturers Name: Swedish Match
 Chemical Name and Synonyms: Cartridges contain a mixture of Isobutane, Propane, Normal butane, Pentane, Hexane and Heptane
 Trade Name: Gas Cartridges (disposable)
 Chemical Family:
 Formula: Liquid Hydrocarbons

C-15 Cartridges are used in the Following Thermacell Products:
 Thermacell Mosquito Repellent (appliance)
 Thermacell Mosquito Repellent Lantern
 Thermacell Mosquito Repellent Patio Lantern and Outdoor Lantern
 Thermacell Compact Mosquito Repellent (compact appliance)
 Thermacell Mini Mosquito Repellent Lantern
 Thermacell Mosquito Repellent Refills

Section II - Hazardous Ingredients

<u>Paints, Preservatives and Solvents</u>	<u>% TLV (Units)</u>	<u>Alloys and Metallic Coatings</u>	<u>%</u>	<u>TLV (Units)</u>
Pigments	0	Base Metal	0	
Catalyst	0	Alloys	0	
Vehicle	0	Metallic Coatings	0	
Solvents	0	Other	0	
Additives	0			
Other	0			

<u>Hazardous Mixtures of Other Liquids, Solids or Gases:</u>	<u>%</u>	<u>TLV (Units)</u>
Disposable gas cartridges contain: Isobutane	50	
Propane	15	
Normal butane	34	
Pentane	0.5	
Hexane / Heptane Mixture	balance	<u>TLV (Units)</u> 800(PPM)

Section III - Physical Data

Boiling Point (°F) at 1 Atmosphere:	10.9	Specific Gravity (H ₂ O=1)	0.55 (liquid)
Vapor Pressure (PSIA) Absolute at 70°F	45	Percent Volatile by Volume (%)	100%
Vapor Density (Air=1) 1 Atmosphere 70°F	2.06	Evaporation Rate	NA (Depends on Surface Exchange Area)

Section IV - Fire and Explosion Hazard Data

<u>Flash Point (Method Used)</u>	<u>Flammable Limits</u>	<u>LEL</u>	<u>UEL</u>
N/A for Gas	In Air	1.8%	8.4%
Extinguishing Media:	Carbon Dioxide, Dry Chemical, or Water Spray		
Special Fire Fighting Procedures:	Protection from exploding cartridges is required if cartridges are subjected to high temperatures or open flames.		

Section V - Health Hazard Data

Threshold Limit Value: 800 PPM for the gas. None for the cartridges
 Effects of Overexposure: The gas causes drowsiness and is an asphyxiant when exposed to in large quantities, however, cartridges are not a health hazard. Emergency First Aid Procedures: Cartridges do not present a health hazard.

Section VI - Reactivity Data

STABILITY Unstable Conditions to Avoid:
 High temperature or open flame Stable

HAZARDOUS POLYMERIZATION

Will Not Occur —
May Occur Conditions to Avoid: None

Section VII - Spill or Leak Procedures

Steps to be Taken in Case Material is Released or Spilled: N/A - Repack

Waste Disposal Method: Damaged cartridges are to be returned to the distributor or manufacturer. Do not puncture or incinerate.
Empty cartridges may be disposed of at suitable landfill.

Section VIII - Special Protection Information

Respiratory Protection: None required

VENTILATION Local Exhaust: As required Special: None
 Mechanical (General): None Other: None

Protective Gloves: None for cartridges
Eye Protection: None
Other Protective Equipment: None

Section IX - Special Precautions

Precautions to be Taken in Handling and Shipping: Do not puncture cartridges and avoid excessive heat (>120°F).

Other Precautions: None

Section X - MSDS Transport Information

US DOT

Ground: Shipping Name: Consumer Commodity
 Shipping Label: ORM-D

AIR / SEA

UN Number: 2037

Hazard Class: 2

Shipping Name: Receptacles, small, containing gas (gas cartridges) without a release device, non-refillable.

IATA: Goods Acceptable without the Operator's Approval, Paragraph 2.3.5.9

Hair curlers containing hydrocarbon gas, no more than one per passenger or crew member, provided that the safety cover is securely fitted over the heating element. Gas refills for such curlers are not permitted in checked or carry-on baggage. Hence, one curler with one cartridge attached to make a complete curling iron unit may be carried as mentioned above. It is not permitted to carry cartridges or refills that are not part of a curling iron.

Revision Date: 11/22/2009

Supersedes 7/8/03 and 4/18/07