

# Safety Data Sheet

## THERMACELL C-15 CARTRIDGE

Date of Preparation: 20 October 2020

### SECTION 1: IDENTIFICATION

#### Product Identifier

**Product Name:** C-15 Cartridge

Exempt from Dangerous Goods Classification under the UN (see Section 14)

NZ HSNO registration HSR04015

#### Intended Use of the Product

As Gas Cartridge or Energy Cell for Thermacell

Restriction of Use: Refer to Section 15

#### Name, Address, and Telephone of the Responsible Party

##### Company

Mayo Hardware

Australia

4 Secombe Place

Moorebank NSW 2071

Tel 1300 360 211

New Zealand

71 Apollo Drive

Rosedale 0632 Auckland

09 415 6240

#### Emergency Telephone Number

**Emergency Number** : Australia - Poisons Information Centre 131 126 / New Zealand 0800 764766

### SECTION 2: HAZARDS IDENTIFICATION

#### Classification of the Substance or Mixture

##### New Zealand:

**This substance is hazardous according to the EPA Hazardous Substances (Classification)**

##### Notice 2017

##### Australia

**Hazardous Chemical according to the criteria of Work Health and Safety Legislation**

HSNO Code

H2.1.1A

GHS Hazard Class

Flammable Gas Category 1

Liquefied gas

GHS Code

H220

H280

#### Label Elements

##### Hazard Pictograms



GHS02



GHS04

#### Signal Word

##### Hazard Statements

H220 - Extremely flammable gas.

H280 - Contains gas under pressure; may explode if heated.

##### Precautionary Statements

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P103 - Read label before use.

P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

P381 - In case of leakage, eliminate all ignition sources.

P410+P403 - Protect from sunlight. Store in a well-ventilated place.

**Other Hazards Simple Asphyxiant:** May displace oxygen and cause rapid suffocation. Exposure to high vapor concentrations can lead to nausea, headache, dizziness, and in extreme cases, loss of consciousness and death in oxygen deficient environments. Prolonged exposure to vapor may affect the central nervous system. Contact with liquid LPG can cause cold burns. Contains Sulfur, may release small amounts of hydrogen sulfide. Serious effects are unlikely due to the small size of the cartridge unless deliberately inhaled.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Name	Product Identifier	% (w/w)
Butane	(CAS No) 106-97-8	60
Isobutane	(CAS No) 75-28-5	40
Propane	(CAS No) 74-98-6	<= 1
Sulfur	(CAS No) 7704-34-9	<= 0.015

## SECTION 4: FIRST AID MEASURES

### Description of First Aid Measures

**General:** Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention. If frostbite or freezing occurs, immediately flush with plenty of lukewarm water to GENTLY warm the affected area. Do not use hot water. Do not rub affected area. Get immediate medical attention.

**Inhalation:** Serious effects are unlikely due to the small size of the cartridge unless deliberately inhaled. When symptoms occur: go into open air and ventilate suspected area. Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

**Skin Contact:** Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation persists.

**Eye Contact:** Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Obtain medical attention if irritation persists.

**Ingestion:** Rinse mouth. Do NOT induce vomiting.

### Most Important Symptoms and Effects Both Acute and Delayed

**Symptoms/Injuries:** Asphyxiant gas. Compressed gases may create low temperatures when they expand rapidly. Leaks and uses that allow rapid expansion may cause a frostbite hazard.

**Symptoms/Injuries After Inhalation:** May cause drowsiness or dizziness. Vapors are heavier than air and may cause asphyxia by reduction of the oxygen content.

**Symptoms/Injuries After Skin Contact:** May cause skin irritation. May cause frostbite on contact with the liquefied gas. **Symptoms/Injuries After Eye Contact:** May cause eye irritation. May cause frostbite.

**Symptoms/Injuries After Ingestion:** Ingestion is an unlikely route of exposure for a gas.

**Chronic Symptoms:** None known.

### Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

## SECTION 5: FIRE-FIGHTING MEASURES

### Extinguishing Media

**Suitable Extinguishing Media:** Dry chemical, carbon dioxide, water spray, fog.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire.

### Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Extremely flammable gas. Vapors are heavier than air and may travel to an ignition source and flash back to source of vapors.

**Explosion Hazard:** May form flammable/explosive vapor-air mixture. Heating may cause an explosion. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

**Reactivity:** Hazardous reactions will not occur under normal conditions. Pressurized container: may burst if heated.

### Advice for Firefighters

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Leaking gas fire: Do not extinguish, unless leak can be stopped safely. In case of leaking gas fire, eliminate all ignition sources if safe to do so. Do not allow run-off from firefighting to enter drains or water courses – may cause explosion hazard in drains and may reignite on surface water. Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products:** Carbon dioxide, carbon monoxide and low molecular weight hydrocarbons.

### Reference to Other Sections

Refer to section 9 for flammability properties.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, Protective Equipment and Emergency Procedures**

**General Measures:** Use special care to avoid static electric charges. Eliminate every possible source of ignition. Do not breathe gas. Use only outdoors or in a well-ventilated area. Ruptured cylinders may rocket.

**For Non-Emergency Personnel**

**Protective Equipment:** Use appropriate personal protection equipment (PPE). **Emergency Procedures:** Evacuate unnecessary personnel.

**For Emergency Personnel**

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

**Environmental Precautions**

Avoid release to the environment.

**Methods and Material for Containment and Cleaning Up**

**For Containment:** If possible, stop flow of product.

**Methods for Cleaning Up:** Use water spray to reduce vapors or divert vapor cloud drift.

**Reference to Other Sections**

See Section 8, Exposure Controls and Personal Protection. See Section 13, Disposal Considerations.

**SECTION 7: HANDLING AND STORAGE**

**Precautions for Safe Handling**

**Additional Hazards When Processed:** Use only as directed by the information identified in the package insert. Handle empty containers with care because residual vapors are flammable. Do not puncture or incinerate container.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Do not eat, drink or smoke when using this product.

**Conditions for Safe Storage, Including Any Incompatibilities**

**Technical Measures:** Proper grounding procedures to avoid static electricity should be followed. Comply with applicable regulations. **Storage Conditions:** Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep in fireproof place. Protect from heat and direct sunlight.

**Incompatible Materials:** Acids. Solvents.

**Specific End Use(s)** As Gas Cartridge or Energy Cell

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control Parameters**

For substances listed in section 3 that are not listed here, there are no established Exposure Standards from Safe Work Australia or New Zealand

<b>Butane (106-97-8)</b>	Australia and New Zealand	TWA 800ppm	TWA 1900 mg/m <sup>3</sup>
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**Exposure Controls**

**Appropriate Engineering Controls:** Ensure adequate ventilation, especially in confined areas. Gas detectors should be used when flammable gases/vapors may be released.

**Personal Protective Equipment:** Not generally required. The use of personal protective equipment may be necessary as conditions warrant.

**Materials for Protective Clothing:** Chemically resistant materials and fabrics. Flame retardant antistatic protective clothing. **Hand Protection:** Wear chemically resistant protective gloves.

**Eye Protection:** Chemical safety goggles.

**Respiratory Protection:** If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. **Thermal Hazard Protection:** If material is cold, wear thermally resistant protective gloves.

**Other Information:** When using, do not eat, drink or smoke.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**Information on Basic Physical and Chemical Properties**

Physical State	: Gas
Appearance	: Colorless
Odour	: Faint, Disagreeable
Odour Threshold	: Not available
pH	: Not applicable
Evaporation Rate	: Fast (gas)
Boiling Point	: -2°C
Freezing Point	: -135°C
Flash Point	: -40 °C
Auto-ignition Temperature	: >428C
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Extremely Flammable
Lower Flammable Limit	: 1.8%
Upper Flammable Limit	: 8.6%
Vapour Pressure	520 kPa @ 40°C
Relative Vapor Density at 20 °C	: 2.0
Specific Gravity	: Not available
Solubility	: Insoluble in water
Partition Coefficient: N-Octanol/Water	: Not available
Viscosity	: Not available
Explosion Data – Sensitivity to Mechanical Impact	: Sensitive to mechanical impact.
Explosion Data – Sensitivity to Static Discharge	: Static discharge could act as an ignition source.

**SECTION 10: STABILITY AND REACTIVITY**

**Reactivity:** Hazardous reactions will not occur under normal conditions. Pressurized container: may burst if heated.

**Chemical Stability:** Extremely flammable gas.

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

**Conditions to Avoid:** Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.

**Incompatible Materials:** Acids. Solvents.

**Hazardous Decomposition Products:** Carbon oxides (CO, CO<sub>2</sub>).

**SECTION 11: TOXICOLOGICAL INFORMATION**

**Information on Toxicological Effects**

Acute toxicity No data for mixture. LD50 and LC50 Data for ingredients indicate low toxicity:

<b>Butane (106-97-8)</b>	
LC50 Inhalation Rat	30957 mg/m <sup>3</sup> (Exposure time: 4 h)
<b>Isobutane (75-28-5)</b>	
LC50 Inhalation Rat	658 mg/l/4h

**Skin Corrosion/Irritation:** Not classified

**Serious Eye Damage/Irritation:** Not classified

**Respiratory or Skin Sensitization:** Not classified

**Germ Cell Mutagenicity:** Not classified

**Carcinogenicity:** Not classified

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** Not classified

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified

**Aspiration Hazard:** Not applicable

**Symptoms/Injuries After Inhalation:** May cause drowsiness or dizziness. Vapours are heavier than air and may reduce oxygen content of inhaled air.

**Symptoms/Injuries After Skin Contact:** May cause mild skin irritation. May cause frostbite on contact with the liquefied gas.

**Symptoms/Injuries After Eye Contact:** May cause short term eye irritation. May cause frostbite.

**Chronic Symptoms:** None known.

**SECTION 12: ECOLOGICAL INFORMATION**

**Toxicity**

**Ecology - General:** Not classified as hazardous to the aquatic environment

<b>Sulfur (7704-34-9)</b>	
LC50 Fish 1	866 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 Daphnia 1	736 mg/l
LC 50 Fish 2	14 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

**Persistence and Degradability** Not established

**Bioaccumulative Potential**

<b>Butane (106-97-8)</b>	
Log Pow	2.89
<b>Isobutane (75-28-5)</b>	
BCF Fish 1	1.57 - 1.97
Log Pow	2.88 (at 20 °C)
<b>Petroleum gases, liquefied (68476-85-7)</b>	
Log Pow	<= 2.8

**Mobility in Soil** Not available

**Other Adverse Effects**

**Other Information:** Avoid release to the environment.

**SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste Disposal Recommendations:** Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

**Additional Information:** Handle empty containers with care because residual vapors are flammable.

**SECTION 14: TRANSPORT INFORMATION**

**In Accordance with the ADG Code/UN Model Regulations in NZ**

**Exempt from classification under Special Provision 191**

**In Accordance with IMDG**

**Exempt from classification under Special Provision 191**

**In Accordance with IATA**

**Proper Shipping Name** : GAS CARTRIDGES without a release device, non-refillable  
**Identification Number** : UN2037  
**Hazard Class** : 2  
**Label Codes** : 2.1  
**ERG Code (IATA)** : 10L



**SECTION 15: REGULATORY INFORMATION**

**Regulations**

All ingredients appear on the Australian Inventory of Industrial Chemicals  
 And New Zealand Inventory of Chemical Substances

**New Zealand:**

This substance is classified hazardous according to the EPA Hazardous Substances (Classification) Notice 2017

**EPA Approval Code: Surface Coatings and Colourants (combustible) – HSR04015**

**Note that this approval code and controls include the thermal mat associated with the commercial product.**

HSNO Classification: 2.1.1A, 6.1E, 9.1A, 9.4C

HSW (HS) Regulations 2017 and EPA Notices	Trigger Quantity
Certified Handler	Not required
Location Certificate	Not required
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	100kg (9.1A)
Emergency Response Plan	100kg (9.1A)
Secondary Containment	100kg (9.1A)
Restriction of Use	Only use for the intended purpose. Not for Agricultural or horticultural use.

# Safety Data Sheet

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Revision Date : 20/10/2020

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### Abbreviations

**ADG Code** Australian Dangerous Goods Code, 7<sup>th</sup> revised edition

**TWA** Time Weighted Average

### Party Responsible for the Preparation of This Document

Thermacell Repellents, Inc. 781-541-6900

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*