

## 1. Identification

|                          |                                                                                                                                                                                                                                                                                                           |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product identifier       | Thermacell C-15 Cartridge                                                                                                                                                                                                                                                                                 |
| Product No(s).           | (With units): MR-GJ, MR-LJ, MR-RJ, MR-XJ, MR450X, MR-CL, MR-CLC, MR-9SB, MR-9L, MR-9W, MR-KA, MR-KB, MR-BP, MR-CLE, MR-CLB, MR-CLD, MR-BPR, MR-PSB, MR-PSG, MR-PSR, MR-PSL, MRD201, MRD202, MRD203, MR-300G, MR-300L, MR-300V, MR-TJ, MR-FJ (Refills): R1, R4, RB1, RB4, R5, R10, L4, R25, E1, E4, C2, C4 |
| Recommended use          | Gas cartridge or Energy Cell                                                                                                                                                                                                                                                                              |
| Recommended restrictions | Use with Thermacell Repellers, Lanterns, and Torches. Keep out of reach of children. Use only per label directions.                                                                                                                                                                                       |
| Company name             | Thermacell Repellents, Inc.                                                                                                                                                                                                                                                                               |
| Address                  | 26 Crosby Drive<br>Bedford, MA 01730                                                                                                                                                                                                                                                                      |
| Telephone                | 866.753.3837                                                                                                                                                                                                                                                                                              |

## 2. Hazard(s) identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

|                       |                      |               |
|-----------------------|----------------------|---------------|
| Physical hazards      | Flammable gases      | Category 1    |
|                       | Gases under pressure | Liquefied gas |
| Health hazards        | Not classified.      |               |
| Environmental hazards | Not classified.      |               |
| OSHA defined hazards  | Not classified.      |               |
| Hazard symbol         |                      |               |



|                                           |                                                                                                                          |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Signal word                               | Danger                                                                                                                   |
| Hazard statement                          | Extremely flammable gas. Contains gas under pressure; may explode if heated.                                             |
| Precautionary statement                   |                                                                                                                          |
| Prevention                                | Keep away from heat/sparks/open flames/hot surfaces. - No smoking.                                                       |
| Response                                  | Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so. |
| Storage                                   | Protect from sunlight. Store in a well-ventilated place.                                                                 |
| Disposal                                  | Dispose of waste and residues in accordance with local/regional/national/international regulations.                      |
| Hazard(s) not otherwise classified (HNOC) | None known.                                                                                                              |
| Supplemental information                  | None.                                                                                                                    |

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3. Composition/information on ingredients

Hazardous component(s):

| <u>Chemical name</u>    | <u>CAS Number</u> | <u>Concentration</u> |
|-------------------------|-------------------|----------------------|
| Liquefied Petroleum Gas | 68476-85-7        | 100                  |

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4. First-aid measures

|                                                                        |                                                                                                                                                           |
|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inhalation                                                             | If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist. |
| Skin contact                                                           | Wash off with soap and water. Get medical attention if irritation develops and persists.                                                                  |
| Eye contact                                                            | Rinse with water. Get medical attention if irritation develops and persists.                                                                              |
| Ingestion                                                              | Not likely, due to the form of the product.                                                                                                               |
| Most important symptoms/effects, acute and delayed                     | Anesthetic effects at high concentrations.                                                                                                                |
| Indication of immediate medical attention and special treatment needed | Provide general supportive measures and treat symptomatically.                                                                                            |
| General information                                                    | Ensure that medical personnel are aware of the material(s) involved. Show this safety data sheet to the doctor in attendance.                             |

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5. Fire-fighting measures

|                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable extinguishing media                                  | Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Unsuitable extinguishing media                                | None known.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Specific hazards arising from the chemical                    | Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.                                                                                                                                                                                                                                                                                                              |
| Special protective equipment and precautions for firefighters | Self-contained breathing apparatus and full protective clothing must be worn in case of fire.                                                                                                                                                                                                                                                                                                                                                                                                   |
| Fire fighting equipment/instructions                          | In case of fire and/or explosion do not breathe fumes. Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. If this cannot be done, allow fire to burn. Move undamaged containers from immediate hazard area if it can be done safely. Stay away from ends of container. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely. |

|                      |                                                                                                                                                                           |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Specific methods     | Use standard firefighting procedures and consider the hazards of other involved materials. Cool containers exposed to flames with water until well after the fire is out. |
| General fire hazards | Extremely flammable gas. Contents under pressure. Pressurized container may explode when exposed to heat or flame.                                                        |

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## 6. Accidental release measures

|                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Personal precautions, protective equipment and emergency procedures | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS. |
| Methods and materials for containment and cleaning                  | Stop leak if you can do so without risk. Use water spray to reduce vapors or divert vapor cloud drift. Isolate area until gas has dispersed. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material.                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Environmental precautions                                           | Avoid discharge into drains, water courses or onto the ground.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

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## 7. Handling and storage

|                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Precautions for safe handling                                | Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not smoke. Turn device off after each use and when empty. Protect cartridges from physical damage; do not drag, roll, slide, or drop. Use only properly specified equipment which is suitable for this product. The use of hydrocarbon fuel in an area without adequate ventilation may result in hazardous levels of incomplete combustion products (e.g. carbon monoxide, oxides of sulfur and nitrogen, benzene and other hydrocarbons) and/or dangerously low oxygen levels. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Use care in handling/storage. |
| Conditions for safe storage, including any incompatibilities | Keep away from heat, sparks and open flame. This material can accumulate static charge which may cause spark and become an ignition source. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).                                                                                                                                                                                                                                                                                                                                   |

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### OSHA

| Component               | Type | Value      |
|-------------------------|------|------------|
| Liquefied Petroleum Gas | TWA  | 1000 ppm   |
|                         | TWA  | 1800 mg/m3 |

#### ACGIH

| Component               | Type | Value    |
|-------------------------|------|----------|
| Liquefied Petroleum Gas | TWA  | 1000 ppm |

|                                  |                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Biological limit values          | No biological exposure limits noted for the ingredient(s).                                                                                                                                                                                                                                                                                                                                    |
| Appropriate engineering controls | Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. |

### Individual protection measures, such as personal protective equipment

|                                |                                                                                                                                                                                                                                                |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Eye/face protection            | Wear safety glasses with side shields (or goggles).                                                                                                                                                                                            |
| Skin protection                | Wear appropriate chemical resistant gloves.                                                                                                                                                                                                    |
| Respiratory protection         | In case of insufficient ventilation, wear suitable respiratory equipment. Chemical respirator with organic vapor cartridge.                                                                                                                    |
| Thermal hazards                | Wear appropriate thermal protective clothing, when necessary.                                                                                                                                                                                  |
| General hygiene considerations | When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. |

## 9. Physical and chemical properties

### Appearance

|                                       |                                                 |
|---------------------------------------|-------------------------------------------------|
| Physical state                        | Gas.                                            |
| Form                                  | Liquefied gas.                                  |
| Color                                 | Colorless.                                      |
| Odor                                  | No distinct odor.                               |
| Odor threshold                        | Not available.                                  |
| pH                                    | Not applicable.                                 |
| Melting/freezing point                | < -292 °F / < -180 °C                           |
| Initial boiling point/range           | -40 to -22 °F / -40 to -30 °C                   |
| Flash point                           | < 23 °F / < -5 °C (Closed Cup - Pensky Martens) |
| Lower Explosive Limits (vol % in air) | 1.8                                             |
| Upper Explosive Limits (vol % in air) | 13.0                                            |
| Auto-ignition Temperature             | 752-842 °F / 400-450 °C                         |
| Evaporation rate                      | Not available.                                  |

|                                            |                          |
|--------------------------------------------|--------------------------|
| Vapor pressure                             | 1400 kPa @ 57°F / 14°C   |
| Vapor density                              | >1                       |
| Specific Gravity (water=1)                 | 0.45-0.6 @ 60°F (15.6°C) |
| Percent Volatile                           | 100%                     |
| Solubility (water)                         | Negligible               |
| Partition coefficient<br>(n-octanol/water) | Not available.           |

## 10. Stability and reactivity

|                                    |                                                                                                         |
|------------------------------------|---------------------------------------------------------------------------------------------------------|
| Reactivity                         | The product is stable and non-reactive under normal conditions of use, storage and transport.           |
| Chemical stability                 | Material is stable under normal conditions.                                                             |
| Possibility of hazardous reactions | No dangerous reaction known under conditions of normal use.                                             |
| Conditions to avoid                | Avoid all possible sources of ignition. Heat will increase pressure in the cartridge.                   |
| Incompatible materials             | Avoid contact with acids, aluminum chloride, chlorine, chlorine dioxide, halogens and oxidizing agents. |
| Hazardous decomposition products   | Not anticipated under normal conditions of use.                                                         |

## 11. Toxicological information

### Information on likely routes of exposure

|                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inhalation                                                                   | Unlikely to be harmful. Asphyxiant at high concentrations in confined spaces may limit oxygen available for breathing.                                                                                                                                                                                                                                                                                                                                                                        |
| Skin contact                                                                 | Skin contact is not anticipated.                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Eye contact                                                                  | Direct contact with eyes is not anticipated.                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Ingestion                                                                    | Ingestion is not anticipated.                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Symptoms related to the physical, chemical and toxicological characteristics | Light hydrocarbon gases are simple asphyxiants and can cause anesthetic effects at high concentrations. Symptoms of overexposure, which are reversible if exposure is stopped, can include shortness of breath, drowsiness, headaches, confusion, decreased coordination, visual disturbances and vomiting. Continued exposure can lead to hypoxia (inadequate oxygen), rapid breathing, cyanosis (bluish discoloration of the skin), numbness of the extremities, unconsciousness and death. |

### Information on toxicological effects

| Acute toxicity                    |                                                                    |                                           |
|-----------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| Components                        | Species                                                            | Test Results                              |
| Liquefied Petroleum Gas           | Rat                                                                | Acute Toxicity (LC50): > 10,000 ppm (gas) |
| Respiratory or skin sensitization |                                                                    |                                           |
| Respiratory sensitization         | Not a respiratory sensitizer.                                      |                                           |
| Skin sensitization                | Not expected to cause skin sensitization.                          |                                           |
| Germ cell mutagenicity            | No data available to indicate product or any components present at |                                           |



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|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Carcinogenicity                                       | greater than 0.1% are mutagenic or genotoxic.                                                                                                                                                                                                                            |
| Reproductive toxicity                                 | Not classifiable as to carcinogenicity to humans.<br>Not expected to cause reproductive toxicity. Exposure of rats during gestation days 6-10 to concentrations of 1000, 5000, and 10,000 ppm liquefied petroleum gas did not result in fetal toxicity or abnormalities. |
| Specific target organ toxicity<br>- single exposure   | Not expected to cause organ effects from single exposure.                                                                                                                                                                                                                |
| Specific target organ toxicity<br>- repeated exposure | Not known to cause organ damage. A thirteen week inhalation study in which rats were exposed to liquefied petroleum gas at concentrations of 1000, 5000, and 10,000 ppm did not demonstrate adverse effects.                                                             |
| Aspiration hazard                                     | Not an aspiration hazard.                                                                                                                                                                                                                                                |

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### 12. Ecological information

|                               |                                                                                                                                                   |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Ecotoxicity                   | Petroleum gases will readily evaporate from the surface and would not be expected to have significant adverse effects in the aquatic environment. |
| Persistence and degradability | No data available.                                                                                                                                |
| Bioaccumulative potential     | No data available.                                                                                                                                |
| Mobility in soil              | No data available.                                                                                                                                |

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### 13. Disposal considerations

|                                       |                                                                                                                                                                                                            |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Disposal instructions                 | Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.                   |
| Local disposal regulations            | Dispose in accordance with all applicable regulations.                                                                                                                                                     |
| Hazardous waste code                  | The waste code should be assigned in discussion between the user, the producer and the Waste disposal company.                                                                                             |
| Waste from residues / unused products | Dispose of in accordance with local regulations. Empty cartridges may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).     |
| Contaminated packaging                | Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. |

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### 14. Transport information

|                         |                                                                                                        |
|-------------------------|--------------------------------------------------------------------------------------------------------|
| DOT                     | Consumer Commodity, ORM-D (until 12/31/2020) or Limited Quantity for packages less than 30 kg (66 lb). |
| IATA                    |                                                                                                        |
| UN number               | UN2037                                                                                                 |
| UN proper shipping name | Gas cartridges (flammable) without a release device, non-refillable                                    |
| Transport hazard class  |                                                                                                        |
| Class                   | 2.1                                                                                                    |
| Subsidiary risk         | -                                                                                                      |

Packing group -  
 ERG Code 10L  
 Special precautions for user Not available.

## IMDG

UN number UN2037  
 UN proper shipping name RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable

Transport hazard class(es)  
 Class 2  
 Subsidiary risk -  
 Packing group Not available.  
 Environmental hazards  
 Marine pollutant No  
 EmS F-D, S-U  
 Special precautions for user Not available.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.  
 IATA; IMDG



## 15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

CERCLA Hazardous Substance List (40 CFR 302.4) Not listed.

SARA 304 Emergency release notification Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No  
 Delayed Hazard - No  
 Fire Hazard - Yes  
 Pressure Hazard - Yes  
 Reactivity Hazard - No

SARA 302 Extremely hazardous substance Not listed.

SARA 311/312 Yes

Hazardous chemical SARA 313 (TRI reporting) Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List Not regulated.



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Clean Air Act (CAA) Section 112(r) Not regulated.

Accidental Release Prevention (40 CFR 68.130)

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

### International Inventories

Country(s) or region

United States

All ingredients are listed or are exempt from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

Canada

All ingredients of this product comply with the New Substances Notification requirements under the Canadian Environmental Protection Act (CEPA).

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### 16. Other information

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Disclaimer The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create any warranty, expressed or implied. It is the responsibility of the user to determine the applicability of this information and the suitability of the material or product for any particular purpose.