1. PRODUCT IDENTIFICATION

1.1. Product Identifiers
   Product name : InVade™ Hot Spot™

1.2. Other Means of Identification
   Product synonyms : none

1.3. Recommended Uses/Restrictions to Use
   Uses : Ready to use foaming aerosol utilizing nonpathogenic microbial organisms to digest and remove organic waste from drains and other hard to reach areas
   Restrictions : See product label for details

1.4. Supplier Details
   Company : Rockwell Labs Ltd
             1257 Bedford Avenue
             North Kansas City, MO 64116-4308
             USA
   Telephone : 1 816-283-3167

1.5. Emergency Contact
   Outside normal business hours
   Emergency Phone # : 1 800-424-9300 (USA & Canada)
                        1 703-527-3887 (Outside USA & Canada)

2. HAZARDS IDENTIFICATION

2.1. Classification of Substance or Mixture
   Aerosol: Category 3
   Gases Under Pressure: Compressed gas

2.2. GHS label elements, including precautionary statements
   Pictogram(s)

   Signal word : Warning
   Hazard statement(s)
   H229 : Pressurized container: may burst if heated
   H280 : Contains gas under pressure, may explode if heated
Precautionary statement(s)

P210  Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P251  Do not pierce or burn, even after use.
P403  Store in well ventilated place.
P410 + 412  Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well ventilated place.

2.3. Other hazards which do not result in classification

none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable

3.2. Mixtures

Hazardous component(s) or components of note:

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Contains (% w/w)</th>
<th>CAS-No.</th>
<th>Hazard Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonpathogenic bacillus bacteria</td>
<td>&gt;1 million cfu/gallon</td>
<td>-----</td>
<td>none</td>
</tr>
<tr>
<td>Isobutane</td>
<td>3</td>
<td>75-28-5</td>
<td>Compressed Gas</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

4.1. Description of first aid measures

General advice

Consult a physician or poison control center. Provide this safety data sheet to medical personnel. Move out of hazardous areas.

If inhaled

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

In case of skin contact

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.

In case of eye contact

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 eye. Call a poison control center or doctor for treatment advice.

If swallowed

Call a poison control center or doctor 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.
4.2. Most important symptoms and effects, both acute and delayed
None known
4.3. Indication of any immediate medical attention and special treatment needed, if necessary
None known

5. FIRE FIGHTING MEASURES
5.1. Extinguishing media
Suitable extinguishing media: use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
5.2. Specific hazards arising from the chemical
Oxides of carbon, nitrogen, and sulfur.
5.3. Special protective equipment and precautions for fire fighters
Wear self contained breathing apparatus for firefighting if deemed necessary.
Additional information: none.
5.4. Further information
No data available

6. ACCIDENTAL RELEASE MEASURES
6.1. Personal precautions, protective equipment and emergency procedures
Avoid contact with spilled product and contaminated surfaces. Evacuate personnel to safe areas during emergencies. For safe handling instructions see section 7. For proper PPE see section 8.
6.2. Environmental precautions
Prevent further leakage or spillage if safe to do so.
6.3. Methods and materials for containment and cleaning up
Wipe up any spilled material and dispose of according to instructions in section 13. Wash contaminated surfaces with soap and water. If required, clean surface with bleach or quaternary ammonia disinfectant.

7. HANDLING AND STORAGE
7.1. Precautions for safe handling
Handle in accordance with good industrial hygiene practices. For additional precautions see section 2.2
7.2. Conditions for safe storage, including any incompatibilities
Store in a cool dry place, out of direct sunlight. Store in original container in well ventilated place. Do not store where children or animals may gain access.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
8.1. Control parameters
Components with workplace parameters

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isobutane</td>
<td>75-28-5</td>
<td>TWA 1,000 ppm</td>
<td>ACGIH (TLV)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA 800 ppm (1900 mg/m³)</td>
<td>NIOSH REL</td>
<td></td>
</tr>
</tbody>
</table>
8.2. **Appropriate engineering controls**
Ensure relevant engineering controls are employed to prevent exceeding threshold values for the listed control parameters in section 8.1.

8.3. **Individual protection measures, such as personal protective equipment**
In normal use and handling conditions refer to the product label for required PPE. In all other cases the following recommendations would apply.

**Eye/face protection**
Safety glasses or other similar eye protection conforming to ANSI Z87.1 standards recommended when handling product.

**Skin protection**
Chemical resistant nitrile rubber or similarly compatible gloves recommended when handling product. Dispose of contaminated gloves after use in accordance with applicable local and state regulations. Wash exposed skin with soap and water immediately. Wash all contaminated clothing prior to reuse.

**Respiratory protection**
Not required under normal use conditions. Chemical cartridge respirator with organic vapor cartridge recommended when risk assessment shows need for air-purifying respirators.

**Thermal hazards**
None known

9. **PHYSICAL AND CHEMICAL PROPERTIES**

9.1. **Information on basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance;</td>
<td>White foam</td>
</tr>
<tr>
<td>Odor;</td>
<td>Citrus</td>
</tr>
<tr>
<td>Odor threshold;</td>
<td>No data available</td>
</tr>
<tr>
<td>pH;</td>
<td>6.5 – 7.5 (25 °C)</td>
</tr>
<tr>
<td>Melting point/freezing point;</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range;</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point;</td>
<td>&gt; 200 °F (93 °C)</td>
</tr>
<tr>
<td>Evaporation rate;</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas);</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits;</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure;</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor density;</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density;</td>
<td>0.99 g/ml</td>
</tr>
</tbody>
</table>
9.2. Additional Information
No data available

10. STABILITY AND REACTIVITY
10.1. Reactivity
No data available
10.2. Chemical stability
Stable under recommended storage conditions.
10.3. Possibility of hazardous reactions
No data available
10.4. Conditions to avoid
Exposure to temperatures above 50 °C (122 °F).
10.5. Incompatible materials
10.6. Hazardous decomposition products
Other decomposition products – no data available
In the event of a fire: see section 5

11. TOXICOLOGICAL INFORMATION
11.1. Information on toxicological effects
Acute Toxicity
LD50 Oral – Rat – > 5000 mg/kg
LD50 Dermal – Rat – > 5000 mg/kg
LD50 Inhalation – no data available
Skin corrosion/irritation
Not a skin irritant
Serious eye damage/irritation
Not an eye irritant
Respiratory or skin sensitization
Not a known sensitizer
Germ cell mutagenicity
Not a known mutagen
Carcinogenicity
IARC: No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.

NTP: No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

OSHA: No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

**Reproductive toxicity**
Not a known reproductive toxicant

**Specific target organ toxicity – single exposure**
No data available

**Specific target organ toxicity – repeated exposure**
No data available

**Aspiration hazard**
No data available

11.2. **Other information**
No data available

12. **ECOLOGICAL INFORMATION**

12.1. **Toxicity**
- Toxicity to fish: no data available
- Toxicity to daphnia: no data available
- and other aquatic invertebrates

12.2. **Persistence and degradability**
No data available

12.3. **Bioaccumulative potential**
No data available

12.4. **Mobility in soil**
No data available

12.5. **Other adverse effects**
No data available

13. **DISPOSAL CONSIDERATIONS**

13.1. **Disposal Methods.**
The best disposal method is to use the entire quantity per label directions. If it is necessary to dispose of unused material then follow the label instructions and relevant local, state and federal waste disposal guidelines.

**Product Disposal:**
Do not contaminate water, food or feed by storage or disposal.

**Packaging Disposal:**
If empty: Place in trash or offer for recycling if available. If partly filled: Call your local solid waste agency or 1-800-CLEANUP which is managed as a public-private partnership. See section 8 for proper PPE and precautionary handling measures.

14. TRANSPORT INFORMATION

**DOT**
- UN number: 1950
- Class: 2.2
- Packing Group: Aerosols, non-flammable, (each not exceeding 1 L capacity), LTD QTY

**IMDG**
- UN number: 1950
- Class: 2.2
- Packing Group: Aerosols, non-flammable, (each not exceeding 1 L capacity), LTD QTY

**IATA**
- UN number: 1950
- Class: 2.2
- Packing Group: Aerosols, non-flammable, (each not exceeding 1 L capacity), LTD QTY

15. REGULATORY INFORMATION

**SARA 302 Components**
- No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**
- This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**
- Acute: Sudden Release of Pressure

**California Proposition 65 Components**
- This product does not contain any chemicals known to the state of California to cause cancer, birth defects, or reproductive harm.

**TSCA**
- All components of this product are listed, exempted, or excluded from listing on the U.S. Toxic Substances Control Act chemical substance inventory.

16. OTHER INFORMATION

**Acronyms and abbreviations used**
- LD50: Lethal Dose, 50%
- OECD: Organization for Economic Cooperation and Development
- IARC: International Agency for Research on Cancer
- ACGIH: American Conference of Industrial Hygienists
- NTP: National Toxicology Program
- OSHA: Occupational Safety and Health Administration
- DOT: Department of Transportation
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transport Association
SARA Superfund Amendments and Reauthorization Act
TSCA Toxic Substances Control Act
CAS-No. Chemical Abstract Services - Number
PPE Personal Protective Equipment
HMIS Hazardous Materials Identification System
NFPA National Fire Protection Association
PPM Parts Per Million

Hazard Rating System Crossover

<table>
<thead>
<tr>
<th>HMIS Rating</th>
<th>NFPA Rating</th>
<th>NFPA 30 Aerosol Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Hazard:</td>
<td>Health Hazard:</td>
<td>1</td>
</tr>
<tr>
<td>Flammability:</td>
<td>Flammability:</td>
<td>0</td>
</tr>
<tr>
<td>Reactivity:</td>
<td>Reactivity:</td>
<td>0</td>
</tr>
</tbody>
</table>

Preparation information
Prepared by: Rockwell Labs Ltd
Version: 1.3
Revision Date: July 12, 2018
Reason for revision: Added NFPA 30 Aerosol Classification

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