1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Compare-N-Save® Systemic Tree & Shrub Insect Drench
EPA Reg. No.: 228-525-84009
Product Type: Insecticide

Company Name: Ragan and Massey, Inc.
101 Ponchatoula Parkway
Ponchatoula, LA 70454
1-800-264-5281

Telephone Numbers: For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident,
Call CHEMTREC Day or Night: 1-800-424-9300
For Medical Emergencies Only, Call 1-877-325-1840

This product is an EPA FIFRA registered pesticide. Some classifications on this SDS are not the same as the FIFRA label. Certain sections of this SDS are superseded by federal law governed by EPA for a registered pesticide. Please see Section 15. REGULATORY INFORMATION for explanation.

2. HAZARDS IDENTIFICATION

HEALTH HAZARDS:
- Acute toxicity, inhalation Category 4
- Skin irritation Category 2
- Specific target organ toxicity - Repeated exposure Category 2

ENVIRONMENTAL HAZARDS
- Hazardous to the aquatic environment, acute Category 1

SIGNAL WORD: WARNING

HAZARD STATEMENTS
Harmful if inhaled. Causes skin irritation. May cause damage to organs (heart, liver, blood chemistry, and thyroid) through prolonged or repeated exposure. Very toxic to aquatic life.

PRECAUTIONARY STATEMENTS
Avoid breathing mist/vapors/spray. Use only outdoors or in a well-ventilated area. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison control center or doctor if you feel unwell. See product label and Section 4 First Aid for medical advice.

Wash hands and exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Avoid release to the environment. Collect spillage. Dispose of contents/container in accordance with local/regional/national/international regulations.
3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CAS NO.</th>
<th>% BY WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imidacloprid</td>
<td>138261-41-3</td>
<td>6.5 – 7.2</td>
</tr>
<tr>
<td>Propylene Glycol</td>
<td>57-55-6</td>
<td>0.68 – 0.72</td>
</tr>
<tr>
<td>Other Ingredients</td>
<td>Trade Secret</td>
<td>Trade Secret</td>
</tr>
</tbody>
</table>

Synonyms: 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product’s specifications.

4. FIRST AID MEASURES

If Swallowed: 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 the poison control center or doctor. Do not give anything by mouth to an unconscious person.

If in Eyes: Hold eye open and rinse slowly and gently with water for 15 to 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.

Most Important symptoms/effects/acute and delayed: Changes in blood chemistry. Damage to organs (heart, liver, blood chemistry, and thyroid) through prolonged or repeated exposure.

Indication of immediate medical attention and special treatment if needed: Respiratory or skin irritation.

5. FIRE FIGHTING MEASURES

Extinguishing Media: Water, carbon dioxide, dry chemical or foam.

Special Fire Fighting Procedures: Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full fire-fighting turn out gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.

Unusual Fire and Explosion Hazards: If water is used to fight fire, contain runoff, using dikes to prevent contamination of water supplies. Dispose of fire control water later.

Hazardous Decomposition Materials (Under Fire Conditions): May produce gases such as hydrogen chloride, hydrogen cyanide, and oxides of carbon and nitrogen.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.

Environmental Precautions: Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.

Methods for Containment: Dike spill using absorbent or impervious materials such as earth, sand or clay. Collect and contaminated absorbent and dike material for disposal.

Methods for Cleanup and Disposal: Pump any free liquid into an appropriate closed container. Absorb and place into container for disposal. Decontaminate tools and equipment following cleanup. See Section 13: DISPOSAL CONSIDERATIONS for more information.

Other Information: Large spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.
7. HANDLING AND STORAGE

HANDLING:
Causes moderate eye irritation. Avoid contact with eyes or clothing. Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove Personal Protective Equipment (PPE) immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

STORAGE:
Keep out of reach of children and animals. Store in original container only. Store in a cool, dry place and avoid excess heat.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:
Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.

Personal Protective Equipment:
Eye/Face Protection: Not normally required. To avoid contact with eyes, wear chemical goggles or shielded safety glasses. An emergency eyewash or water supply should be readily accessible to the work area.

Skin Protection: To avoid contact with skin, wear long pants, long-sleeved shirt, shoes and socks. An emergency shower or water supply should be readily accessible to the work area.

Respiratory Protection: Not normally required. If vapors or mists exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.

General Hygiene Considerations: Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material: 1) do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored; 2) wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.

Exposure Guidelines:

<table>
<thead>
<tr>
<th>Component</th>
<th>OSHA TWA</th>
<th>OSHA STEL</th>
<th>ACGIH TWA</th>
<th>ACGIH STEL</th>
<th>WEEL TWA</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imidacloprid</td>
<td>NE</td>
<td>NE</td>
<td>10*</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>Propylene Glycol</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
<td>10</td>
<td>mg/m³</td>
</tr>
</tbody>
</table>

NE = Not Established
WEEL = AIHA Workplace Environmental Exposure Levels

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>White colored liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Pungent odor</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>5.90 ± 0.01</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;100º 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>1.006 g/ml</td>
</tr>
</tbody>
</table>
Relative density: No data available
Solubility(ies): Soluble
Partition coefficient: n-octanol/water: No data available
Autoignition temperature: No data available
Decomposition temperature: No data available
Viscosity: 591.112 cSt @ 20º C
VOC Emission Potential (%): 5.42

Note: Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification.

10. STABILITY AND REACTIVITY

Reactivity: Not reactive
Chemical Stability: This material is stable under normal handling and storage conditions.
Possibility of Hazardous Reactions: Will not occur.
Conditions to Avoid: Excessive heat. For imidacloprid, strong exothermal reaction above 200º C.
Incompatible Materials: Not known.
Hazardous Decomposition Products: Under fire conditions, may produce gases such as hydrogen chloride, hydrogen cyanide and oxides of carbon and nitrogen.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation, eye and skin contact.
Symptoms of Exposure: Mildly irritating to the eyes based on toxicity studies. Minimally toxic and slightly irritating to the skin based on toxicity studies. Slightly toxic if ingested based on toxicity studies. Low inhalation toxicity.
Delayed, immediate and chronic effects of exposure: None known.

Toxicological Data:
Data from laboratory studies conducted are summarized below.
- Oral: Rat LD₅₀: >5,000 mg/kg (female)
- Dermal: Rabbit LD₅₀: >5,000 mg/kg
- Inhalation: Rat 4-hr LC₅₀: >2.02 mg/L
- Eye Irritation: Rabbit: Mildly irritating (cleared within 72 hours)
- Skin Irritation: Rabbit: Slightly irritating
- Skin Sensitization: Not a contact sensitiser in guinea pigs following repeated skin exposure.

Subchronic (Target Organ) Effects: Repeated overexposure to imidacloprid, may effect heart, thyroid, blood chemistry, and liver. Ingestion of large amounts of propylene glycol has resulted in symptoms of reversible central nervous system depression including stupor, rapid breathing and heartbeat, profuse sweating and seizures.

Carcinogenicity / Chronic Health Effects: Prolonged overexposure to imidacloprid can cause effect to the thyroid.Repeated overexposure to propylene glycol can produce central nervous system depression, hemolysis and minimal kidney damage. Imidacloprid did not cause cancer in laboratory animal studies. The U.S. EPA has given imidacloprid a Group E classification (evidence of non-carcinogenicity in humans).

Reproductive Toxicity: In a two-generation reproduction study in rats, imidacloprid produced reduced mean body weights and body weight gains. No other reproductive effects were observed.

Developmental Toxicity: Rat and rabbit studies on imidacloprid resulted in skeletal abnormalities, increased resorptions (rabbits) and reduced body weight gains at doses that were also toxic to mother animals.

Genotoxicity: The imidacloprid mutagenicity studies, taken collectively, demonstrate that imidacloprid is not genotoxic or mutagenic.

Assessment Carcinogenicity: None listed with ACGIH, IARC, NTP or OSHA.
12. ECOLOGICAL INFORMATION

Environmental Hazards:
This product is toxic aquatic invertebrates.

Exctoxicity:
Data on Imidacloprid Technical:

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>96-hour LC₅₀ Rainbow Trout</td>
<td>322 mg/l</td>
<td>48-hour EC₅₀ Daphnia</td>
<td>85 mg/l</td>
</tr>
<tr>
<td>96-hour LC₅₀ Mysid:</td>
<td>0.038 ppm</td>
<td>48-hour Honey Bee Contact LD₅₀:</td>
<td>0.078 ug/bee</td>
</tr>
<tr>
<td>Japanese Quail Oral LD₅₀:</td>
<td>31 mg/kg</td>
<td>Bobwhite Quail Oral LD₅₀:</td>
<td>152 mg/kg</td>
</tr>
<tr>
<td>House Sparrow Oral LD₅₀:</td>
<td>41 mg/kg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Environmental Fate:
Hydrolysis half-life of imidacloprid is greater than 30 days at pH 7 and 25°C. The aqueous photolysis half-life is less than 3 hours. The soil surface photolysis of imidacloprid has a half-life of 39 days, and in soil, the half-life ranged from 26 to 229 days.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:
Wastes resulting from the use of this produce may be disposed of on site or at an approved waste disposal facility. Improper disposal of excess pesticide is a violation of Federal law.

Container Handling and Disposal:

Residential: Nonrefillable container. Do not reuse or refill this container. If empty: Place in trash or offer for recycling if available. If partly filled: Call your local solid waste agency for disposal instructions. Never place unused product down any indoor (including toilet) or outdoor (including sewer) drain.

Commercial: Nonrefillable Containers 5 Gallons or Less: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:**
Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Nonrefillable Containers Larger Than 5 Gallons: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse or pressure rinse container (equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank and collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Refillable containers larger than 5 gallons: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full of water and, if possible, spray all sides while adding water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.
14. TRANSPORTATION INFORMATION

Follow the precautions indicated in Section 7: HANDLING AND STORAGE OF THIS SDS.

**DOT:**

- **< 119 gallons per completed package**
  - Non Regulated

- **≥ 119 gallons per completed package**
  - UN 3082, Environmentally hazardous substance, liquid, n.o.s. (Imidacloprid), 9, III Marine Pollutant

**IMDG:**

- UN 3082, Environmentally hazardous substance, liquid, n.o.s. (Imidacloprid), 9, III Marine Pollutant

**IATA:**

- Non Regulated

15. REGULATORY INFORMATION

**EPA FIFRA INFORMATION**

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

CAUTION. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco. Remove and wash contaminated clothing before reuse.

**U.S. FEDERAL REGULATIONS**

**TSCA Inventory:** This product is exempted from TSCA because it is solely for FIFRA regulated use.

**SARA Hazard Notification/Reporting:**

**Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370.66):**

- Immediate and Delayed

**Section 313 Toxic Chemical(s):**

- None

**Reportable Quantity (RQ) under U.S, CERCLA:**

- None

**RCRA Waste Code:**

- Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

**State Information:**

- Other state regulations may apply. Check individual state requirements.

**California Proposition 65:**

- Not listed.

16. OTHER INFORMATION

**National Fire Protection Association (NFPA) Hazard Rating:**

- **Rating for this product:** Health: 2  Flammability: 1  Reactivity: 0
- **Hazards Scale:** 0 = Minimal  1 = Slight  3 = Serious  4 = Severe
This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-ACCEPTED PRODUCT LABELING (attached to and accompanying the product container). This SDS provides important health, safety and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of Federal law to use a pesticide product in any manner not prescribed on the EPA-accepted label.

Although the information and recommendations set forth herein (hereinafter “Information”) are presented in good faith and believed to be correct as of the date hereof, Ragan and Massey, Inc. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Ragan and Massey, Inc. be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFER AND ALL SUCH WARRANTIES ARE HEREBY SPECIFICALLY DISCLAIMED.

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