1. PRODUCT & COMPANY IDENTIFICATION

1.1 Product Name: DustALL™ PRO, 0% VOC, (P/N CCS-2100), 10 oz. (284 g)

1.2 Chemical Name: See ingredients listed in section 3

1.3 Synonyms: 1,1,1,2-Tetrafluoroethane

1.4 Trade Names: DustAll™ Pro

1.5 Product Uses & Restrictions: Dust Removing Spray

1.6 Distributor’s Name: CAIG Laboratories, Inc.

1.7 Distributor’s Address: 12200 Thatcher Court, Poway, CA 92064-6876 USA

1.8 Emergency Phone: CHEMTREC: +1 (703) 527-3887 / +1 (800) 424-9300 (CCN XXXXX)

1.9 Business Phone / Fax: +1 (800) 224-4123

2. HAZARDS IDENTIFICATION

2.1 Hazard Identification: This product is classified as a HAZARDOUS SUBSTANCE and as DANGEROUS GOODS according to the classification criteria of NOHSC: 1086 (2004) and ADG Code (Australia).

WARNING! PRESSURIZED CONTAINER; MAY BURST IF HEATED.

Classification: Aerosols 3

Hazard Statements (H): H229 – Pressurized container; may burst if heated.

Precautionary Statements (P): P210 – Keep away from heat, hot surface, sparks, open flames and other ignition sources. No smoking. P251 – Do not pierce or burn, even after use. P410P412 – Protect from sunlight. Do not expose to temperatures exceeding 50 ºC / 122 ºF

3. COMPOSITION & INGREDIENT INFORMATION

<table>
<thead>
<tr>
<th>CHEMICAL NAME(S)</th>
<th>CAS No.</th>
<th>RTECS No.</th>
<th>EINECS No.</th>
<th>%</th>
<th>TLV</th>
<th>STEL</th>
<th>ES-TEL</th>
<th>ES-Peak</th>
<th>TWA</th>
<th>PEL</th>
<th>STEL</th>
<th>IDLH</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,1,2-TETRAFLUORETHANE</td>
<td>811-97-2</td>
<td>K8842500</td>
<td>212-377-0</td>
<td>60-100</td>
<td>NA</td>
<td>NA</td>
<td>1000</td>
<td>4240</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td></td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

4.1 First Aid:

Ingestion: If ingested, do not induce vomiting. If product has been swallowed, drink plenty of water or milk IMMEDIATELY. If the patient is vomiting, continue to offer water or milk. Never give water or milk to an unconscious person. Contact the nearest Poison Control Center or local emergency number. Provide an estimate of the time at which the material was ingested and the amount of the substance that was swallowed.

Eyes: Splashes are not likely; however, if product gets in the eyes, flush with copious amounts of lukewarm water for at least 15 minutes lifting upper and lower lids, occasionally. If irritation persists repeat flushing.

Skin: Wash thoroughly with soap and water. In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Treat for frostbite if necessary, be gently warming affected area. If irritation, redness or swelling persists, contact a physician immediately.

Inhalation: Remove victim to fresh air at once. If breathing difficult, administer oxygen. If breathing stops give artificial respiration. Keep person warm, quiet and get medical attention.

Notes to Physicians: Because of possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, should be used with special caution only in situations of emergency life support.

4.2 Effects of Exposure:

Ingestion: If product is swallowed, may cause nausea, vomiting and/or diarrhea.

Eyes: Moderately irritating to the eyes. Symptoms of overexposure may include redness, itching, irritation and watering.

Skin: May be irritating to skin. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) in some sensitive individuals.

Inhalation: None expected.

4.3 Symptoms of Overexposure:

Ingestion: Nausea, intestinal discomfort, vomiting and/or diarrhea.

Eyes: Overexposure in eyes may cause redness, itching and watering.

Skin: Symptoms of skin overexposure may include redness, itching, and irritation of affected areas. Frostbite like symptoms. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) in some individuals.

4.4 Acute Health Effects:

Moderate irritation to eyes and skin near affected areas. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea. Frostbite like effect to skin.

4.5 Chronic Health Effects:

Overexposure may trigger asthma-like symptoms in some sensitive individuals. May also induce skin sensitization and respiratory hypersensitivity. Possible allergic dermatitis.

4.6 Target Organs: Eyes, Skin, Respiratory System.
4. FIRST AID MEASURES – cont’d

4.7 Medical Conditions Aggravated by Exposure: Pre-existing dermatitis, other skin conditions, and disorders of the target organs (eyes, skin, and respiratory system).

5. FIREFIGHTING MEASURES

5.1 Fire & Explosion Hazards: Level 3 Aerosol (NFPA 30B). Aerosols may burst at temperatures above 120 °F. Cool uninvolved containers to prevent possible bursting. Aerosols may be projectile hazards when bursting. If aerosols are bursting, stay clear until bursting is complete. This product is not flammable. However, if involved in a fire, this product may decompose at high temperatures to form toxic gases (e.g., CO, Hydrogen Fluoride).

5.2 Extinguishing Methods: Water, Foam, CO₂. Dry Chemical. Use water spray to cool unopened containers.

5.3 Firefighting Procedures: Fight fires as for surrounding materials. As in any fire, wear MSHA/NIOSH approved self-contained breathing apparatus (pressure-demand) and full protective gear. Keep containers cool until well after the fire is out. Use water spray to cool fire-exposed surfaces and to protect personal. Fight fire upwind. Avoid spraying water directly into storage containers because of danger of boil-over. Prevent runoff from fire control or dilution from entering sewers, drinking water supply, or any natural waterway. Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies.

6. ACCIDENTAL RELEASE MEASURES

6.1 Spills: Before cleaning any spill or leak, individuals involved in spill cleanup must wear appropriate Personal Protective Equipment. Plastic or rubber gloves, respirator, eye protection and apron may be required for clean-up of large spills.

Small Spills: Wear appropriate protective equipment including gloves and protective eyewear. Use a non-combustible material such as vermiculite or sand to soak up the product and place into a container for later disposal. Do not use water or a material such as “speedy dry” to soak up material. Sweep up material using non-sparking materials (e.g., plastic brooms, shovels, dustpans) and place into a plastic container or plastic liner within another container.

Large Spills: Keep incompatible materials (e.g., organics such as oil) away from spill. Stay upwind and away from spill or release. Isolate immediate hazard area and keep unauthorized personnel out of area. Stop spill or release if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant.

7. HANDLING & STORAGE INFORMATION

7.1 Work & Hygiene Practices: Do not eat, drink or smoke when handling this product. Contents under pressure. Handle as to avoid puncturing container(s). When used as intended, no additional protective equipment is necessary. Use chemical goggles if eye contact is possible. Wash unwashable residues with soap and warm water.

7.2 Storage & Handling: Use and store in a cool, dry, well-ventilated location (e.g., local exhaust ventilation, fans) away from heat and direct sunlight. Avoid temperatures above 120 °F. Keep away from incompatible substances. Protect containers from physical damage. To avoid unintentional spraying keep cap in place when not in use.

7.3 Special Precautions: Clean all spills promptly.

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1 Exposure Limits: ppm (mg/m³)

<table>
<thead>
<tr>
<th>CHEMICAL NAME(S)</th>
<th>ACGIH</th>
<th>NOHSC</th>
<th>OSHA</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TLV</td>
<td>STEL</td>
<td>ES-TWA</td>
<td>ES-STEL</td>
</tr>
<tr>
<td>1,1,1,2-TETRAFLUORETHANE</td>
<td>NA</td>
<td>1000</td>
<td>1000</td>
<td>4240</td>
</tr>
</tbody>
</table>

8.2 Ventilation & Engineering Controls: General mechanical (e.g., fans) or natural ventilation is sufficient when this product is in use. Use local or general exhaust ventilation to effectively remove and prevent buildup of vapors or mist generated from the handling of this product. Ensure appropriate decontamination equipment is available (e.g., sink, safety shower, eye-wash station).

8.3 Respiratory Protection: No special respiratory protection is required under typical circumstances of use or handling. In instances where dusts of this product are generated, and respiratory protection is needed, use only protection authorized by 29 CFR §1910.134, applicable U.S. State regulations, or the Canadian CAS Standard Z94.4-93 and applicable standards of Canadian Provinces, EC member States, or Australia.

8.4 Eye Protection: Avoid eye contact. None required under normal conditions of use. Safety glasses could be used when handling or using large quantities of this product.

8.5 Hand Protection: None required under normal conditions of use. However, may cause skin irritation in some sensitive individuals. When handling large quantities (e.g., ≥ 1 gallon (3.8 L)), wear rubber, nitrile or impervious plastic gloves.

8.6 Body Protection: No apron required when handling small quantities. When handling large quantities (e.g., ≥ 5 lbs), eye wash stations and deluge showers should be available. Upon completion of work activities involving large quantities of this product, wash any exposed areas thoroughly with soap and water.
## 9. PHYSICAL & CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>9.1 Appearance:</th>
<th>Aerosol, clear spray</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.2 Odor:</td>
<td>No odor</td>
</tr>
<tr>
<td>9.3 Odor Threshold:</td>
<td>NA</td>
</tr>
<tr>
<td>9.4 pH:</td>
<td>NA</td>
</tr>
<tr>
<td>9.5 Melting Point/Freezing Point:</td>
<td>-108 ºC (-162 ºF)</td>
</tr>
<tr>
<td>9.6 Initial Boiling Point/Boiling Range:</td>
<td>-26.5 ºC (-15.7 ºF)</td>
</tr>
<tr>
<td>9.7 Flashpoint:</td>
<td>NA</td>
</tr>
<tr>
<td>9.8 Upper/Lower Flammability Limits:</td>
<td>NA</td>
</tr>
<tr>
<td>9.9 Vapor Pressure:</td>
<td>NA</td>
</tr>
<tr>
<td>9.10 Vapor Density:</td>
<td>NA</td>
</tr>
<tr>
<td>9.11 Relative Density:</td>
<td>1.21 g/mg^3 at 25 ºC (68 ºF)</td>
</tr>
<tr>
<td>9.12 Solubility:</td>
<td>Partial</td>
</tr>
<tr>
<td>9.13 Partition Coefficient (log P_{ow}):</td>
<td>NA</td>
</tr>
<tr>
<td>9.14 Autoignition Temperature:</td>
<td>NA</td>
</tr>
<tr>
<td>9.15 Decomposition Temperature:</td>
<td>NA</td>
</tr>
<tr>
<td>9.16 Viscosity:</td>
<td>NA</td>
</tr>
<tr>
<td>9.17 Other Information:</td>
<td>NA</td>
</tr>
</tbody>
</table>

## 10. STABILITY & REACTIVITY

<table>
<thead>
<tr>
<th>10.1 Stability:</th>
<th>Stable under normal conditions; unstable with heat or contamination.</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.2 Hazardous Decomposition Products:</td>
<td>Oxides of carbon (CO, CO_2), nitrogen (NO_x) and sulfur (SO_2).</td>
</tr>
<tr>
<td>10.3 Hazardous Polymerization:</td>
<td>Will not occur.</td>
</tr>
<tr>
<td>10.4 Conditions to Avoid:</td>
<td>Open flames, sparks, high heat, incompatible substances and direct sunlight.</td>
</tr>
<tr>
<td>10.5 Incompatible Substances:</td>
<td>Avoid extreme heat and ignition sources. Store away from oxidizers.</td>
</tr>
</tbody>
</table>

## 11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>11.1 Routes of Entry:</th>
<th>Inhalation: YES</th>
<th>Absorption: YES</th>
<th>Ingestion: YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.2 Toxicity Data:</td>
<td>This product has NOT been tested on animals to obtain toxicity data. Toxicology data, found in scientific literature, is available for some of the components of the product: 1,1,1,2-Tetrafluorethane</td>
<td>LC50 (inhalation, rat 4hr) 1,500,000 mg/m^3</td>
<td></td>
</tr>
<tr>
<td>11.3 Acute Toxicity:</td>
<td>Moderate irritation to eyes and skin near affected areas. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.4 Chronic Toxicity:</td>
<td>This material may aggravate any pre-existing skin condition (e.g., dermatitis).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.5 Suspected Carcinogen:</td>
<td>No.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.6 Reproductive Toxicity:</td>
<td>This product is not reported to produce reproductive toxicity in humans.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.7 Intoxication of Product:</td>
<td>The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) upon prolonged or repeated exposure.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.8 Biological Exposure Indices:</td>
<td>NE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.9 Physician Recommendations:</td>
<td>Treat symptomatically.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## 12. ECOLOGICAL INFORMATION

| 12.1 Environmental Stability: | There is no specific data available for this product. |
| 12.2 Effects on Plants & Animals: | There are no specific data available for this product. |
| 12.3 Effects on Aquatic Life: | There are no specific data available for this product; however, very large releases of this product may be harmful or fatal to overexposed aquatic life. |

## 13. DISPOSAL CONSIDERATIONS

<table>
<thead>
<tr>
<th>13.1 Waste Disposal:</th>
<th>Products covered by this MSDS, in their original form, when disposed as waste, are considered non hazardous waste according to Federal RCRA regulations (40 CFR 261). Disposal should be in accordance with local, state and federal regulations. Dispose of in accordance with federal, state and local regulations.</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.2 Special Considerations:</td>
<td>California Waste Code: 331</td>
</tr>
</tbody>
</table>
14. TRANSPORTATION INFORMATION

The basic description (ID Number, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation. Additional descriptive information may be required by 49 CFR, IATA/ICO, IMDG and the CTDG.

14.1 49 CFR (GND): UN3159, 1,1,1,2-TETRAFLUORETHANE, 2.2; or CONSUMER COMMODITY, ORM-D (IP VOL ≤ 1.0 L) – until 12/31/2020 (outside packaging must be marked “INSIDE CONTAINERS COMPLY WITH PRESCRIBED REGULATIONS”)

14.2 IATA (AIR): UN3159, 1,1,1,2-TETRAFLUORETHANE, 2.2

14.3 IMDG (OCN): UN3159, 1,1,1,2-TETRAFLUORETHANE, 2.2

14.4 TDGR (Canadian GND): UN3159, 1,1,1,2-TETRAFLUORETHANE, 2.2; or MARK PACKAGE “LIMITED QUANTITY,” “LTD QTY,” or “QUANTITE LIMITÉE”

14.5 ADR/RID (EU): UN3159, 1,1,1,2-TETRAFLUORETHANE, 2.2

14.6 SCT (MEXICO): UN3159, 1,1,1,2-TETRAFLUORETHANE, 2.2

14.7 ADGR (AUS): UN3159, 1,1,1,2-TETRAFLUORETHANE, 2.2

15. REGULATORY INFORMATION

15.1 SARA Reporting Requirements: This product does not contain any substances subject to SARA Title III, section 313 reporting requirements.

15.2 SARA Threshold Planning Quantity: There are no specific Threshold Planning Quantities for the components of this product.

15.3 TSCA Inventory Status: The components of this product are listed on the TSCA Inventory.

15.4 CERCLA Reportable Quantity (RO): NA

15.5 Other Federal Requirements: This product complies with the appropriate sections of the Food and Drug Administration’s 21 CFR Subchapter G, (Cosmetics).

15.6 Other Canadian Regulations: This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by the CPR. The components of this product are listed on the DSL/NDSL. None of the components of this product are listed on the Priorities Substances List.

15.7 State Regulatory Information – cont’d

1,1,1,2-Tetrafluoromethane can be found on the following state criteria lists: Minnesota Hazardous Substances List (MN) No other ingredients in this product, present in a concentration of 1.0% or greater, are listed on any of the following state criteria lists: California Proposition 65 (CA65), Delaware Air Quality Management List (DE), Florida Toxic Substances List (FL), Massachusetts Hazardous Substances List (MA), Michigan Critical Substances List (MI), Minnesota Hazardous Substances List (MN), New Jersey Right-to-Know List (NJ), New York Hazardous Substances List (NY), Pennsylvania Right-to-Know List (PA), Washington Permissible Exposures List (WA), Wisconsin Hazardous Substances List (WI).

15.8 Other Requirements: The primary components of this product are not listed in Annex I of EU Directive 67/548/EEC: Irritant (Xi), Harmful (Xn) Risk Phrases: (R) 20/21 – Harmful by inhalation and in contact with skin. Safety Phrases: (S) 2-28-45 – Keep out of reach of children. After contact with skin wash with plenty of warm water. In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).

16. OTHER INFORMATION

16.1 Other Information: WARNING! PRESSURIZED CONTAINER; MAY BURST IF HEATED. Use only as directed. Keep out of reach of children. After contact with skin wash with plenty of warm water. In case of accident or if you feel unwell seek medical advice immediately (show the label where possible). If skin irritation occurs: get medical advice/attention. KEEP LOCKED UP AND OUT OF REACH OF CHILDREN.

16.2 Terms & Definitions: See last page of this Safety Data Sheet.

16.3 Disclaimer: This Safety Data Sheet is offered pursuant to OSHA’s Hazard Communication Standard, 29 CFR §1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of ShipMate & CAIG Laboratories, Inc.’s knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness is not guaranteed and no warranties of any type, either expressed or implied, are provided. The information contained herein relates only to the specific product(s). If this product(s) is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.

16.4 Prepared for: CAIG Laboratories, Inc. 12200 Thatcher Court Poway, CA 92064-6876 Tel: +1 (800) CAIG-123 (244-4123) Fax: +1 (858) 486-8398 fax http://www.caig.com/
16.5 Prepared by:

ShipMate, Inc.
P.O. Box 787
Sisters, Oregon 97759-0787 USA
Tel: +1 (310) 370-3600
Fax: +1 (310) 370-5700
http://www.shipmate.com
A large number of abbreviations and acronyms appear on a SDS. Some of these that are commonly used include the following:

**GENERAL INFORMATION:**

- CAS No.: Chemical Abstract Service Number
- ACOSH: American Conference on Governmental Industrial Hygienists
- Ceiling Limit
- ES: Exposure Standard (Australia)
- IDLH: Immediately Dangerous to Life and Health
- OSHA: U.S. Occupational Safety and Health Administration
- PEL: Permissible Exposure Limit
- STEL: Short-Term Exposure Limit
- TLV: Threshold Limit Value
- TWA: Time Weighted Average

**FIRST AID MEASURES:**

- CPR: Cardiopulmonary resuscitation - method in which a person whose heart has stopped receives manual chest compressions and breathing to circulate blood and provide oxygen to the body.

**HMIS-III HEALTH, FLAMMABILITY & REACTIVITY RATINGS:**

- 0: Minimal Hazard
- 1: Slight Hazard
- 2: Moderate Hazard
- 3: Severe Hazard
- 4: Extreme Hazard

**PERSONAL PROTECTION RATINGS:**

- A
- B
- C
- D
- E
- F
- G
- H
- I
- J
- K
- X (Consult your supervisor or SOPs for special handling directions.)

- Safety Glasses
- Splash Goggles
- Face Shield & Protective Eyewear
- Gloves
- Protective Clothing & Full Suit
- Dust Respirator
- Full Face Respirator
- Dust & Vapor Half-Mask Respirator
- Airline Hood/Mask or SCBA
- Synthetic Apron
- Boots

**OTHER STANDARD ABBREVIATIONS:**

- ML: Maximum Limit
- mg/mL: milligrams per cubic meter
- NA: Not Available
- ND: Not Determined
- NE: Not Established
- NP: Not Found
- NR: No Results
- ppm: parts per million
- SCBA: Self-Contained Breathing Apparatus

**NATIONAL FIRE PROTECTION ASSOCIATION: NFPA**

- FLAMMABILITY LIMITS IN AIR:
  - Autocloning Temperature
  - Lower Explosive Limit
  - Upper Explosive Limit

**HAZARD RATINGS:**

- 0: Minimal Hazard
- 1: Slight Hazard
- 2: Moderate Hazard
- 3: Severe Hazard
- 4: Extreme Hazard

**REGULATORY INFORMATION:**

- WHMIS: Canadian Workplace Hazardous Materials Information System
- DOT: U.S. Department of Transportation
- TC: Transport Canada
- EPA: U.S. Environmental Protection Agency
- DSL: Canadian Domestic Substance List
- NDSL: Canadian Non-Domestic Substance List
- PSL: Canadian Priority Substances List
- TSCA: U.S. Toxic Substance Control Act
- WAG: Wasserrfährungsklassen (German Water Hazard Class)

**WORKPLACE HAZARDOUS MATERIALS IDENTIFICATION (WHMIS) SYSTEM:**

- Class A
- Class B
- Class C
- Class D1
- Class D2
- Class D3
- Class E
- Class F

- Compressed
- Flammable
- Oxidizing
- Toxic
- Irritating
- Infectious
- Corrosive
- Reactive

**EC (67/548/EEC) INFORMATION:**

- C
- E
- F
- N
- O
- T
- X
- X

- Corrosive
- Explosive
- Flammable
- Harmful
- Oxidizing
- Toxic
- Irritating
- Infectious

**CLP/GHS (1272/2008/EC) PICTOGRAMS:**

- Explosive
- Flammable
- Oxidizing
- Pressured
- Corrosive
- Toxic
- Harmful
- Irritating
- Health
- Hazard
- Environment