SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Plumb-Away®
Product Use Description: Drain Opener/Cleaner, Aerosol version

Company: 1MARK CONSUMER PRODUCTS, INC.
Address: 4620 Calimesa St., # D-1
Las Vegas, NV 89115
(702) 248-0144

Emergency Telephone Numbers:
(800) 424-9300/(800) 811-8001
Fax Number:
(702) 293-0149

Additional Information:
E-Mail: info@1-mark.com
MSDS Requests: 702-248-0144
MSDS Fax Requests: 702-293-0149
Website: www.1-mark.com

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
Not a hazardous substance or mixture.

GHS Label Element
Not a hazardous substance or mixture. ORM-D Consumer Commodity.

Potential Health Effects

Inhalation: Inhalation of vapors, mists, or sprays of the product can mildly to moderately irritate tissue of the nose, mouth, throat and upper respiratory system. Inhalation of the product can cause depression of the central nervous system and systemic poisoning. Inhalation of high concentrations of vapor is harmful and may cause heart irregularities, unconsciousness or death. Intentional misuse or deliberate inhalation may cause death without warning. Vapor reduces oxygen available for breathing and is heavier than air. Persons with pre-existing diseases of the central nervous or cardiovascular system may have increased susceptibility to the toxicity of excessive
exposures. Aspiration of the liquid or vapors of the product into the lungs can result in pulmonary edema. Repeated overexposure via inhalation could result in pharyngitis, bronchitis, gastritis and gastroduodenitis (inflammation of the stomach and duodenum).

**Skin/Eye Contacts:** Over-exposure skin contact with the liquid may cause mild to moderate irritation, and even frostbite. The Dimethyl Ketone element of the product is a defatting agent, and may cause the development of rashes, welts, and dermatitis, and peeling or splitting of nails with prolonged or repeated exposure to the skin. Eye contact with the liquid or vapors of this product may cause tearing, redness and pain. Severe exposure to the eyes could result in corneal injury. Repeated exposure to the eyes can result in chronic conjunctivitis.

**Ingestion:** Not anticipated to be a significant route of overexposure for the product. If the product is swallowed, it is moderately toxic, causing abdominal pain, nausea, and diarrhea. Repeated ingestion exposure to Dimethyl Ketone has lead to liver injury and renal injury.

**Skin Absorption:** Not anticipated to be a significant route of overexposure for the product.

**Carcinogenicity:** 1,1,1,2-Tetrafluoroethane is not listed as a carcinogen by IARC, NTP, OSHA, or ACGIH. Dimethyl Ketone is not classifiable as a carcinogen by EPA and ACGIH. This product is not expected to cause mutagenic or teratogenic effects in humans. The product has not been reported to cause embryotoxic effects in humans. In animal studies related to 1,1,1,2-tetrafluoroethane, slight embryotoxicity occurs, but only at maternally toxic dose levels.

**Emergency Overview**

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>Characteristic of Dimethyl Ketone and/or lemon peel</td>
</tr>
<tr>
<td>Hazard Summary</td>
<td>No Information Available</td>
</tr>
<tr>
<td>NFPA Rating</td>
<td>Health: 1; Flammability: 0; Reactivity: 0</td>
</tr>
<tr>
<td>HMIS Rating</td>
<td>Health: 1; Flammability: 0; Reactivity: 1</td>
</tr>
</tbody>
</table>

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

<table>
<thead>
<tr>
<th>CAS-Number</th>
<th>Chemical Name</th>
<th>Concentration (%) (Trade Secret)</th>
</tr>
</thead>
<tbody>
<tr>
<td>811-97-2</td>
<td>1,1,1,2-tetrafluoroethane</td>
<td>70 - 90.2 %</td>
</tr>
<tr>
<td>67-64-1</td>
<td>Dimethyl Ketone</td>
<td>9 - 29 %</td>
</tr>
<tr>
<td>N/A</td>
<td>Fragrance</td>
<td>0 - 0.8 %</td>
</tr>
</tbody>
</table>

**SECTION 4. FIRST AID MEASURES**

**Primary Route of Entry:** Dermal, Inhalation, Eye

**Emergency and First Aid Procedure (CALL A PHYSICIAN):**

**EYES:** If the product’s liquid or vapors enter the eyes, open subject’s eyes while under gently running water. Use sufficient force to open eyelids and “roll” eyes. Minimum flushing is for 15 minutes. Subject must seek medical attention if any adverse effect occurs.
SKIN CONTACT: If the product contaminates the skin, flush with water for a minimum of 15 minutes. Treat for frostbite, if necessary. Victim must seek medical attention if any adverse effect occurs.

INHALATION: If vapors, mists, or sprays of the product are inhaled, immediately remove to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Remove or cover gross contamination to avoid exposure to rescuers.

INGESTION: If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, do not induce vomiting. Subject should drink milk, egg whites or large quantities of water. Never induce vomiting or give diluent (milk or water) to someone who is unconscious, having convulsions, or unable to swallow.

NOTE TO PHYSICIANS: ADMINISTER OXYGEN, IF NECESSARY; TREAT SYMPTOMS; ELIMINATE OVEREXPOSURE.

A. FOR OVER-EXPOSURE TO 1,1,1,2-TETRAFLUOROTHANE: BECAUSE OF POSSIBLE DISTURBANCES OF CARDIAC RHYTHM, CATECHOLAMINE DRUGS, SUCH AS EPINEPHRINE, SHOULD BE CONSIDERED WITH SPECIAL CAUTION ONLY IN EMERGENCY LIFE SUPPORT SITUATIONS. TREATMENT OF OVEREXPOSURE SHOULD BE DIRECTED AT THE CONTROL OF SYMPTOMS AND THE CLINICAL CONDITIONS.

B. FOR OVER-EXPOSURE TO DIMETHYL KETONE: INGESTION: EMESIS IS NOT RECOMMENDED BECAUSE OF POTENTIAL CENTRAL NERVOUS SYSTEM DEPRESSION AND THE CHANCE FOR ASPIRATION OF THE VOMITUS. GASTRIC LAVAGE MAY BE USEFUL. ADMINISTER A SLURRY OF ACTIVATED CHARCOAL IF PERSON IS ALERT AND ABLE TO SWALLOW. OCULAR: IF EYE IRRITATION OR INJURY IS EVIDENT, TEST VISUAL ACUITY. EXAMINE EYES FOR CORNEAL DAMAGE USING A MAGNIFYING LENS OR A SLIT LAMP AND FLUORESCENT STAIN. FOR SMALL CORNEAL DEFECTS, USE OPHTHALMIC ANTIBIOTIC OINTMENT OR DROPS, ANALGESIC MEDICATION, AND AN EYE PATCH. IMMEDIATE ATTENTION WITH AN OPHTHALMOLOGIST SHOULD BE SOUGHT IF CORNEAL INJURY HAS OCCURRED. INHALATION: ADMINISTER SUPPLEMENTAL OXYGEN IF PERSON HAS RESPIRATORY COMPLAINT. EXPOSED PERSONS MUST BE CLOSELY MONITORED FOR DEVELOPMENT OF ANY SIGNS OF PULMONARY EDEMA, WHICH CAN BE DELAYED. INTUBATE TRACHEA IN CASE OF RESPIRATORY COMPROMISE. WHEN PERSON’S CONDITION PRECLUDES ENDOTRACHEAL INTUBATION, PERFORM CRICOThYROIDOTOMY, IF EQUIPPED AND TRAINED TO DO SO.

SECTION 5. FIRE FIGHTING MEASURES

Flammability Classification OSHA: Non-Flammable (DOT test)
Shipping Classification D.O.T.: ORM-D Consumer Commodity
Flash Point: 1,1,1,2-Tetrafluoroethane: Will Not Burn (TOC)

Dimethyl Ketone: -20 deg C (-4 deg F) (TCC)

Flammable Limits in Air: 1,1,1,2-Tetrafluoroethane: Not Applicable
Dimethyl Ketone: LEL: 2.6%; UEL: 12.8%

Fire and Explosion Hazards: Do not expose to heat or flame or store above 120° F, as high internal pressures may cause cylinders to rupture.

Extinguishing Media: This product consists of a Class 1B Combustible Liquid (Dimethyl Ketone) propelled by a non-flammable liquefied gas (1,1,1,2-Tetrafluoroethane) and a slight amount of fragrance. The product has been tested by flame test for flammability and was found to be non-flammable by DOT test criteria.

However, exposure to direct flame may cause the aerosol can to rupture violently. In addition, if in the event of a rupture of the aerosol can, the liquid...
or vapors of the component Dimethyl Ketone may present a hazard of flammability. If involved in a fire, the product may produce irritating vapors and toxic gases (e.g. carbon monoxide, carbon dioxide). The following are recommended for extinguishing fires involving this product: Water Spray: YES (for cooling only); Foam: YES; Halon: YES; Carbon Dioxide: YES; Dry Chemical: YES; Other: Any “B” Class.

Special Fire Fighting Procedures: Fire fighter should wear self-contained breathing apparatus and full protective clothing. Use water spray to cool nearby containers and structures exposed to fire. Move canisters from fire area if it can be done without risk to personnel. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas. Rinse contaminated equipment thoroughly with soapy water before returning such equipment to service.

SECTION 6. ACCIDENTAL RELEASE MEASURES

If material is released or spilled: Ventilate area, especially low places where heavy vapors might collect. Remove all possible sources of ignition. Avoid prolonged breathing of vapors. Use self-contained breathing apparatus for large spills/releases. Use appropriate personal protection equipment during clean up. Product is highly volatile, rapidly evaporates.

Absorb spilled liquid with activated carbon, poly pads or other suitable absorbent materials. If necessary, rinse contaminated area and equipment with soapy water, followed by a triple-rinse with water. Decontaminate the area thoroughly. Place all spill residue in a suitable container.

Waste disposal: Comply with all Federal, State and local Regulations, or appropriate standards of Canada, EU Member States, or those of other countries.

SECTION 7. HANDLING AND STORAGE

Respiratory Protection: Under normal manufacturing conditions, no respiratory protection is required when using this product. Self-contained breathing apparatus (SCBA) is required if a large release occurs.

Ventilation: Use adequate ventilation in volume and pattern to keep exposure below recommended levels. Normal ventilation for standard manufacturing procedures is generally adequate. Local exhaust should be used when large amounts are released. Mechanical ventilation should be used in low places. General mechanical: ventilation should comply with OSHA 1910.94. Should not be mixed with air for leak testing or used with air for any other purpose above atmospheric pressure.

Hand Protection: Wear chemically-resistant gloves when using this product. Butyl rubber gloves, Teflon™, 4h™, Barricade™, Chemrel™, Responder™ are recommended of estimated resistance to break-through longer than four (4) hours.

Eye Protection: Safety glasses, goggles with splash guards or face/side shields.

Body Protection/Other Protective Equipment: Use body protection appropriate to the task. Avoid breathing vapors and liquid contact with skin or eyes.

Additional: Store in cool, dry area away from sources of ignition and incompatible materials. When storing large quantities, store in building designed and protected against fire.

**DO NOT STORE IN DIRECT SUNLIGHT OR ABOVE 120° F.**
SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters:

<table>
<thead>
<tr>
<th>Component</th>
<th>TLV (ACGIH)</th>
<th>PEL (OSHA)</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,1,1,2-tetrafluoroethane:</td>
<td>Not Est.</td>
<td>Not Est.</td>
<td>WEEL: 1000ppm (8&amp;12 hr. TWA)</td>
</tr>
<tr>
<td>Dimethyl Ketone:</td>
<td>500</td>
<td>2400</td>
<td>NIOSH RELs:</td>
</tr>
<tr>
<td></td>
<td>A4 (Not Classifiable as a Human Carcinogen)</td>
<td>750</td>
<td>TWA = 250</td>
</tr>
</tbody>
</table>

Personal protective equipment:

Respiratory Protection: Under normal manufacturing conditions, no respiratory protection is required when using this product. Self-contained breathing apparatus (SCBA) is required if a large release occurs.

Ventilation: Use adequate ventilation in volume and pattern to keep exposure below recommended levels. Normal ventilation for standard manufacturing procedures is generally adequate. Local exhaust should be used when large amounts are released. Mechanical ventilation should be used in low places. General mechanical: ventilation should comply with OSHA 1910.94. Should not be mixed with air for leak testing or used with air for any other purpose above atmospheric pressure.

Hand Protection: Wear chemically-resistant gloves when using this product. Butyl rubber gloves, Teflon™, 4h™, Barricade™, Chemrel™, Responder™ are recommended of estimated resistance to break-through longer than four (4) hours.

Eye Protection: Safety glasses, goggles with splash guards or face/side shields.

Body Protection/Other Protective Equipment: Use body protection appropriate to the task. Avoid breathing vapors and liquid contact with skin or eyes.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Vapor Pressure: 4730 mm at 25 deg C (77 deg F)
Boiling Point (760 mm hg): -26.5 deg C (-16 deg F)
Melting Point/Freezing Point: 101 deg C (-149.8 deg F)
Vapor Density (air = 1.0): 5.25 kg/cubic meter
Percentage Volatile by Weight: 100%
Water Solubility: .57 m/l at 25 deg C
Odor & Appearance: Colorless liquid and gas with an odor characteristic of Dimethyl Ketone and/or lemon peel.
Odor Threshold: No Data Available
Evaporation Rate: No Data Available
Volatile Organic Compound %: 0.000%
Flash Point: 1,1,1,2-Tetrafluoroethane: Will Not Burn (TOC)
Dimethyl Ketone: -20 deg C (-4 deg F) (TCC)
Flammable Limits in Air: 1,1,1,2-Tetrafluoroethane: Not Applicable
Dimethyl Ketone: LEL: 2.6%; UEL: 12.8%

pH: N/A
Solubility: Slight
SECTION 10. STABILITY AND REACTIVITY

Stability: Stable at standard temperatures and pressures. Hazardous polymerization will not occur.

Conditions to Avoid: Exposure to heat, open flame, welding arcs, sparks or other and other sources of ignition, along with contact with incompatible materials. Cylinders exposed to high temperatures or direct flame can rupture or burst.

Materials to Avoid: Product is incompatible with strong oxidizers (e.g. peroxides, nitrates and perchlorates). Dimethyl Ketone component can react violently with chlorinated solvent/alkali mixtures (e.g. chloroform and sodium hydroxide), and may form explosive mixtures with chromic anhydride, chromyl chloride, nitric acid, acetic acid, nitric acid + sulfuric acid, nitroyl perchlorate, nitryl perchlorate, permonosulfonic acid and thiodicyclo. Dimethyl Ketone reacts vigorously with hexachloromalalum, sulfur dichloride and potassium tertbutoxide.

SECTION 11. TOXICOLOGICAL INFORMATION

Dimethyl Ketone Component:
Acute toxicity: Not Classified

LD50 oral rat: 5800 mg/kg
LD50 dermal rabbit: 15688 mg/kg
LC50 inhalation rat (mg/l): 76000 mg/m3

1,1,1,2-Tetrafluoroethane Component:
Acute toxicity: Not Classified

Oral: Not Applicable
Dermal: Not Applicable
LC50 inhalation, rat, 4h: 567000 ppm
Inhalation Low Observed, dog: 75000 ppm
Adverse Effect Concentration (LOAEC): Cardiac sensitization

Further information: Cardiac sensitization threshold limit: 312975 mg/m3
Anaesthetic effects threshold limit: 834600 mg/m3
Did not show carcinogenic or teratogenic effects in animal experiments. Inhalation of decomposition products in high concentration may cause shortness of breath (lung oedema). Rapid evaporation of the liquid may cause frostbite.

Product Mixture:
Acute toxicity: Not Classified

Skin corrosion/irritation: Not Classified. Prolonged contact with liquid may cause frostbite.
Eye damage/irritation: May cause mild eye irritation. Prolonged contact with liquid may cause frostbite.

Respiratory or skin sensitization: Not Classified

Germ cell mutagenicity: Not Classified

Carcinogenicity: Not Classified

Reproduction toxicity: Not Classified

Specific target organ toxicity (single exposure): May cause drowsiness or dizziness.

Specific target organ toxicity (repeated exposure): Not Classified

Aspiration hazard: Not Classified

Symptoms/injuries after inhalation: Excessive inhalation may cause drowsiness or dizziness.

Symptoms/injuries after eye contact: May cause mild eye irritation. Prolonged contact with liquid may cause frostbite.

Symptoms/injuries after ingestion: Not a normal route of exposure. Ingestion may cause nausea, vomiting and diarrhea.

SECTION 12. ECOLOGICAL INFORMATION

Acetone component:

Toxicity

LC50 fishes 1: 4144.846 mg/l (exposure time: 96 h - Species Oncorhychus mykiss (rainbow trout))

EC Daphnia 1: 1679.66mg/l (Exposure time: 48 h - Species: Daphnia magna (water flea) [Static])

LC 50 fish 2: 6210 - 8120 mg/l (Exposure time: 96 h - Species: Pimephales promelas [Static])

EC 50 Daphnia 2: 12600 - 12700 mg/l (Exposure time: 48 h - Species: Daphnia magna (water flea))

Persistence and degradability: Readily biodegradable in water. Not Established.

Bioaccumulative potential: BCF Fish: 0.69
Log Kow: -0.24
Not Established

Mobility in soil: No additional information available.

Other adverse effects/other information: Avoid release to the environment.

1,1,1,2-tetrafluoroethane:

Toxicity

LC50 fish: 450 mg/l (exposure time: 96 h - Species Oncorhychus mykiss (rainbow trout))
EC50 algae: > 118 mg/l (exposure time: 72 h) Information given is based on data obtained from similar substances.

EC50 Daphnia: 980 mg/l (exposure time: 48 h)

Persistence and degradability: Not available

Bioaccumulative potential: Not available

Mobility in soil: Not applicable

Other adverse effects: Not available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods:

Waste from residues: Dispose of in accordance with all applicable Federal, State and local Regulations or appropriate standards of Canada, EU Member States, or those of other countries.

Contaminated packaging: Empty containers can be recycled, and we encourage users to deposit in their recycling bin or take empty containers to an approved recycling facility.

SECTION 14. TRANSPORT INFORMATION

Proper Shipping Name: Aerosols, non-flammable, limited quantities (each less than 1L):

<table>
<thead>
<tr>
<th>DOT ORM-D, Class 9, ID 8000</th>
<th>IATA ORM-D, Class 9, ID 8000</th>
<th>IMDG ORM-D, Class 9, ID 8000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packing Group: Not Applicable</td>
<td>Y963</td>
<td>Y963</td>
</tr>
</tbody>
</table>

Hazard Class Number and Description: as shown above (Non-Flammable Gas). Also, UN 1950, Class 2.2.

Placards: none required.


Other: The components of the product are not classified by the DOT as marine pollutants (as defined by 49 CFR 172.101, Appendix B).

TRANSPORT CANADA, TRANSPORATION OF DANGEROUS GOODS REGULATIONS: THIS MATERIAL IS CONSIDERED AS DANGEROUS GOODS. Use the above information for the preparation of Canadian shipments.

SECTION 15. REGULATORY INFORMATION

OSHA: Air Contaminant: Not listed.

EPA:

SARA/TITLE III: The components of this product are not subject to the reporting requirements of Sections 302, 304 and 313.

SARA Threshold Planning Quantity: Not Applicable.

CERCLA Reportable Quantity: Dimethyl Ketone = 5000 lbs. (2276.5 kg)

TSCA: All components of this product are listed in the TSCA inventory.

CALIFORNIA Proposition 65: No component of this product is on the California Proposition 65 list.

CANADA:

CDSL/NDL (Canadian Domestic Substance List/Non Domestic Substance List): All are Listed

WHMIS: Not controlled.
Labeling according to **EEC Directive**: No special packaging or labeling requirements.

NFPA Rating: Health: 1; Flammability: 0; Reactivity: 0.

HMIS Rating: Health: 1; Flammability: 0; Reactivity: 1.

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**SECTION 16. OTHER INFORMATION**

Revision Information
Version 1.04W
Print Date: 6/1/2014

**DISCLAIMER OF LIABILITY**

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THIS MSDS INFORMATION APPLIES TO PLUMB-AWAY® DRAIN OPENER/CLEANER SPRAY ONLY.